Planning for Upgrading Avaya Aura® applications to Release 8.1.x

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Chapter 1: Introduction

Purpose

This document provides planning information for upgrading Avaya Aura® applications on supported platforms. It also outlines generic installation and configuration details of Avaya Aura® applications. For more information about upgrading process, see the application-specific document on Avaya Support website at https://support.avaya.com/.

This document is useful for personnel performing site preparation and planning tasks before upgrading Avaya Aura® applications.

Prerequisites

Before upgrading the Avaya Aura® applications, ensure that you have the following knowledge, skills, and tools.

Product knowledge

- Avaya Aura® Appliance Virtualization Platform
- Avaya Aura® System Manager
- Avaya Aura® Session Manager
- Avaya Aura® Communication Manager
- Avaya Aura®AVP Utilities
- Avaya Aura® Presence Services
- Avaya Aura® Device Services
- Avaya Aura® Application Enablement Services
- Avaya Aura® Media Server
- Avaya Session Border Controller for Enterprise
- Avaya Diagnostic Server

Platform knowledge

- Linux® Operating System
- VMware®

- Amazon Web Services
- Kernel-based Virtual Machine (KVM)
- Microsoft Azure
- Google Cloud Platform

Tools

To deploy or upgrade the Avaya Aura® application OVA and to configure the applications, you need the following tools:

- A browser for administering Avaya Aura®applications.
- USB keyboard, USB mouse, video monitor, and cables or laptop computer with Ethernet crossover cable.
- An SSH client, for example, PuTTY and PuTTYgen.
- An SFTP client for Windows, for example WinSCP.

Change history

Issue	Date	Summary of changes
11	October 2022	Updated the section Supported ESXi version on page 37.
10	June 2022	For Release 8.1.3.5, updated the section Downloading software from PLDS on page 33. Updated the following sections: • Presence Services overview on page 22 • Supported footprints of Communication Manager Software-only ISO image on on-premise on page 45 • Supported footprints of Communication Manager on Amazon Web Services on page 46
9	September 2021	Updated the section Upgrading VMware ESXi version on page 37. Added the section Upgrading Avaya Solutions Platform 130 from Release 4.0 to 5.0 with Avaya Aura applications 8.1.x on page 38.

Table continues…

Issue	Date	Summary of changes
8	March 2021	Updated the following sections: • Supported footprints for the System Manager on AWS on page 44 • Supported footprints of Communication Manager Software-only ISO image on on-premise on page 45 • Supported footprints of Communication Manager on KVM on page 46 • Supported footprints of Communication Manager on Amazon Web Services on page 46 • Supported footprints for Session Manager on page 48 • Supported footprints of Session Manager OVA on Amazon Web Services on page 50 • Supported footprints of Session Manager ISO on Amazon Web Services on page 51 • Supported footprints for AE Services on AWS on page 53 • Supported footprints of Avaya WebLM on page 54 Added the section Supported footprints of Communication Manager ISO on Infrastructure as a Service on page 47.
7	February 2021	Updated the following sections: • Session Manager overview on page 20 • Supported footprints for Session Manager on page 48 • Supported footprints for Avaya Aura Session Manager on Google Cloud Platform on page 51 • Supported footprints for Avaya Aura Session Manager on Microsoft Azure on page 52 • AE Services resource requirements and the supported footprints on page 52
6	November 2020	Updated the section Supported Red Hat Enterprise Linux operating system versions for Software-only Environment on page 41.
5	October 2020	For Release 8.1.3, updated the following sections: • Avaya Aura Application Enablement Services overview on page 21 • Supported ESXi version on page 37 • Supported footprints of Communication Manager on Amazon Web Services on page 46 • Supported footprints for Session Manager on page 48
4	April 2020	Updated the section Topology on page 11.

Table continues…

Issue	Date	Summary of changes
3	March 2020	For Release 8.1.2, updated the following sections: • Customer configuration data for System Manager on page 55 • Customer configuration data for Communication Manager on page 56 • Customer configuration data for Session Manager on page 57 • Customer configuration data for Application Enablement Services on page 58
2	October 2019	For Release 8.1.1, added the following sections: • Guidelines for upgrading platform and hypervisor on page 32 • Upgrading VMware ESXi version on page 37 For Release 8.1.1, updated the following sections: • Upgrade sequence for Avaya components on page 61 • Supported ESXi version on page 37
1	June 2019	Release 8.1 document.

Chapter 2: Overview

Avaya Aura® overview

Avaya Aura® is a flagship communications solution that uses an IP and SIP-based architecture to unify media, modes, networks, devices, applications, and real-time, actionable presence across a common infrastructure. This architecture provides on-demand access to advanced collaboration services and applications that improve employee efficiency. Avaya Aura® is available under Core or Power Suite Licenses. Each suite provides a customized set of capabilities designed to meet the needs of different kinds of users. Customers might mix Core and Power licenses on a single system based on their needs.

The following are some of the capabilities that Avaya Aura® solution provides:

- Support for up to 28 instances of Session Manager and 300,000 users and 1 million devices
- Support for up to 18,000 simultaneously registered H.323 endpoints out of 41,000 endpoints per single Communication Manager server and SIP endpoints in an enterprise
- Advanced Session Management Capabilities
- Converged voice and video call admission control
- SIP features, including E911, which reports the desk location of the caller
- Avaya Communication Server 1000 SIP networking and feature transparency
- Session Manager SIP routing adaptations
- A central management application, System Manager, for all Avaya Aura® applications and Avaya Communication Server 1000, with single authentication

Topology

The following depicts the Avaya Aura® architecture and various components of Avaya Aura®:

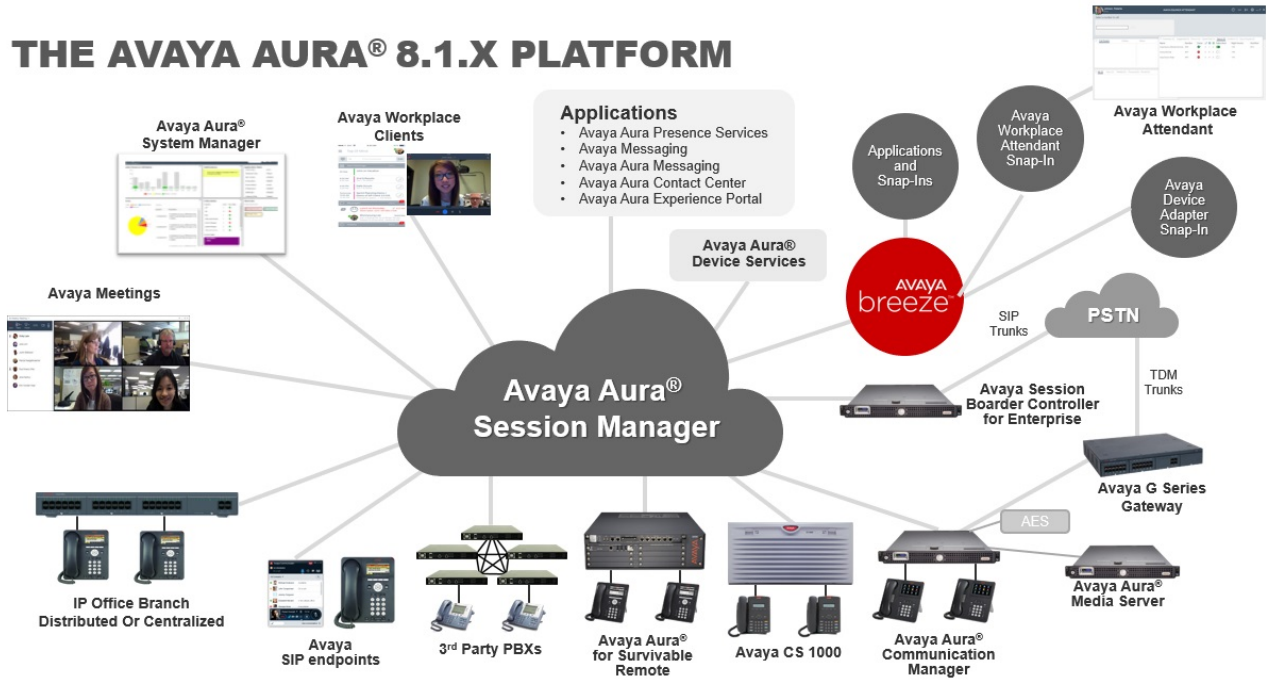

Figure 1: Avaya Aura® Architecture

A standard Avaya Aura® architecture consists of the following core components:

- Avaya Aura® System Manager
- Avaya Aura® Session Manager
- Avaya Aura® Communication Manager
- Avaya Aura® Application Enablement Services
- Avaya Aura® Media Server
- Avaya Aura® Presence Services
- Avaya Aura® Device Services
- Avaya Branch Gateway
- Avaya Workplace Client
- Avaya Device Adapter
- Avaya Breeze®

System Manager provides a common console to manage the Avaya Aura® applications. System Manager also enables to bulk import and export users, including user profiles and global settings such as public contacts lists, shared addresses, and presence access control lists.

Session Manager provides core SIP routing and integration services that provide communication between SIP-enabled entities, for example, PBXs, SIP proxies, gateways, adjuncts, trunks, and applications across the enterprise. Session Manager is configured from System Manager and uses centralized, policy-based routing to provide integration services. It also sends and

receives SIP notifications and SIP Publish messages to and from various endpoints and Presence Services.

Endpoints registered to Session Manager use Communication Manager for feature support. Endpoints that use H.323 protocol register to Communication Manager over IP. Digital and analog endpoints are directly connected to their respective digital and analog media modules on a Branch Gateway, for example, G450.

Communication Manager is an extensible, scalable, and secure telephony application that connects to private and public telephone networks, Ethernet LANs, and the Internet. Communication Manager organizes and routes voice, data, image, and video transmissions.

Application Enablement Services is a software platform that leverages the capabilities of Avaya Aura® Communication Manager to enterprise applications. By using Application Enablement Services, the Application Enablement Services Collector component within Presence Services enables Presence Services to report telephony presence from Communication Manager endpoints. The Application Enablement Services Collector collects Presence from H323, DCP, analog, and SIP telephones administered as OPTIM extensions.

The Avaya Aura® Media Server delivers advanced multimedia processing features to a broad range of products and applications. Utilizing the latest open standards for media control and media processing, the highly scalable software based solution deploys on standard server hardware, running Linux or Windows operating systems.

Presence Services collects, aggregates, and publishes presence information from and to multiple sources and clients.

Avaya Aura® Device Services provides a set of services for Avaya's next generation of clients. These services include:

- Enterprise login Service: Users can log on to their Avaya device using their Enterprise credential and receive all of the Avaya Aura® services they are entitled to.
- Dynamic Configuration Service: This new configuration service dynamically generates the set of configuration parameters necessary to enable automatic bootstrapping of Avaya soft clients by searching the various Avaya databases, where configuration information is stored, and extracting and presenting relevant information to the Avaya devices.
- Contact Service: This new service simplifies the client experience and provides a standard way of managing, storing and searching users and the enterprise contacts detail, including picture, and making them available across all of the user's devices.
- Web Deployment Service: This service brings mobile phone deployment services to Microsoft Windows and Apple Mac OS environments. When a new device update is available within the customers environment the user is automatically prompted to retrieve this update.

The Avaya Branch Gateway provides a secure, reliable, and scalable platform for the delivery of Avaya Communication Manager-based IP telephony applications. It is targeted to mid to large sized branch offices, medium sized standalone businesses or small campus environments. It can be configured to extend Communication Manager features and applications to branch offices at the edge of the enterprise network. The Branch Gateway can also be configured with an S8XXX Server to deliver Communication Manager-based telephony to campus environments.

Avaya Workplace Client is a fully integrated software-based unified communication solution. Avaya Workplace Client is a single, all channel calling, messaging, conferencing and collaboration solution for mobiles, browsers, desktops and room systems.

Avaya Device Adapter Snap-in is a modular, reusable solution that enables UNIStim IP phones working with Avaya Communication Server 1000 (CS 1000) to migrate to Avaya Aura® without significant investment on the existing infrastructure. Device Adapter offers a feasible solution to CS 1000 customers to take advantage of Avaya Aura® features while minimizing expenses on the cables and hardware.

With Avaya Breeze® Platform you can integrate your existing or new applications with our unified communications technology and contact center capabilities including voice, video, text, and email. Bring rich communication capabilities into the social, mobile, and cloud applications that make your business run.

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 supports 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
  - Avaya Aura® 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*.

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 Server 2016, 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, Avaya Aura® 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 Avaya Aura® 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. For 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.

- Configures Remote Syslog Profile.
- Creates the Appliance Virtualization Platform Kickstart file.

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.

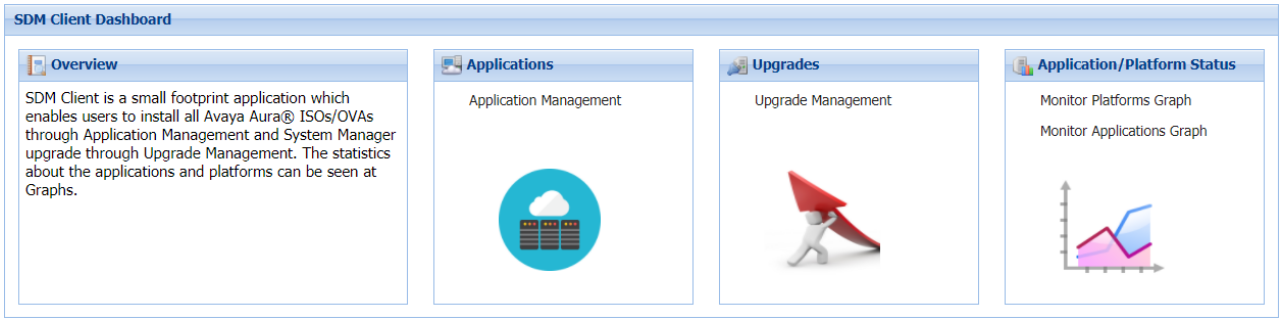

Figure 2: Solution Deployment Manager Client dashboard

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

Centralized Solution Deployment Manager	Solution Deployment Manager Client
Manage virtual machine lifecycle.	Manage virtual machine lifecycle.
Deploy Avaya Aura® applications.	Deploy Avaya Aura® applications.
Deploy hypervisor patches only for Appliance Virtualization Platform.	Deploy hypervisor patches only for Appliance Virtualization Platform.
Upgrade Avaya Aura® applications. Release 7.x and later support upgrades from Linux-based or System Platform-based applications to Virtualized Environment or Appliance Virtualization Platform. Release 7.1 and later support Virtualized Environment to Virtualized Environment upgrades.	Upgrade System Platform-based and Virtualized Environment-based System Manager.
Install software patches for Avaya Aura® applications excluding System Manager application.	Install System Manager patches.
Discover Avaya Aura® applications.	Deploy System Manager.
Analyze Avaya Aura® applications.	-
Create and use the software library.	-

Avaya Aura® core components

Avaya Aura® contains the following core components:

- Avaya Aura® System Manager
- Avaya Aura® Communication Manager
- Avaya Aura® Session Manager
- Avaya Aura® Application Enablement Services
- Avaya Branch Gateway
- Avaya Aura® Media Server
- Avaya Aura® Presence Services
- Avaya Aura® AVP Utilities
- Avaya Device Adapter Snap-in
- Avaya WebLM

System Manager overview

Avaya Aura® System Manager is a central management system that provides a set of shared management services and a common console. All shared and element-specific management for Avaya Aura® applications that System Manager supports is performed from the common console. System Manager provides the following key capabilities:

- Centralized software management solution to support deployments, migrations, upgrades, and updates to the suite of Avaya Aura® applications.
- Avoid duplicate data entry through shared management services.
- Centralized access to all Avaya Aura® applications through a browser-based management console with single sign on.
- Optimization of IT skill sets with consistency of management functions across Avaya solutions.
- Integration with enterprise IT infrastructure, such as identity management, authentication, authorization, security, and enterprise directory

Communication Manager overview

Communication Manager is an extensible, scalable, and secure telephony application that connects to private and public telephone networks, Ethernet LANs, and the Internet. Communication Manager organizes and routes voice, data, image, and video transmissions.

Key features

- Robust call processing capabilities
- Application integration and extensibility

- Advanced workforce productivity and mobility features
- Built-in conferencing and contact center applications
- E911 capabilities
- Centralized voice mail and attendant operations across multiple locations
- Connectivity to a wide range of analog, digital, and IP-based communication devices
- Support for SIP, H.323, and other industry-standard communications protocols over different networks
- More than 700 powerful features
- High availability, reliability, and survivability

Session Manager overview

Avaya Aura® Session Manager is a SIP routing tool that integrates all SIP devices across the entire enterprise network. Session Manager simplifies the existing communication infrastructure by combining existing PBXs and other communications systems, regardless of the vendor, into a cohesive and centrally managed SIP-based communications network.

Session Manager supports the following features:

- Integration with third-party equipment and endpoints to normalize disparate networks.
- Centralized routing of calls using an enterprise-wide numbering plan.
- Centralized management through System Manager, including configuration of user profiles and deployment of enterprise-wide centralized applications.
- Interconnection with Communication Manager and Avaya Communication Server 1000 to provide multiple feature support for SIP and non-SIP endpoints.
- Interconnection with IP Office through SIP to provide feature support for SIP endpoints.
- Third-party E911 emergency call service for enterprise users.
- Centralized Presence Services for scalability and reduced network complexity with a variety of endpoints and communication servers.
- Support for converged voice and video bandwidth management.
- Application sequencing capability to incrementally deploy applications without needing to upgrade the PBX.
- Geographic redundancy.
- Mobility of SIP telephones and enterprise mobility for SIP users.
- Support for call reconstruction to allow Call Preservation for SIP calls, which provides mid-call features to be invoked after a failover.
- Support to carry Presence Information Data Format Location Object (PIDF-LO) as a Multipurpose Internet Mail Extensions (MIME) body/attachment in a SIP message. Session Manager can also pass the PIDF-LO information in the SIP message.

Avaya Aura® Application Enablement Services overview

Avaya Aura® Application Enablement Services (AE Services) is a software platform that leverages the capabilities of Avaya Aura® Communication Manager. AE Services provides an enhanced set of Application Programming Interfaces (APIs), protocols, and web services that expose the functionality of Avaya Communication solutions to corporate application developers, third-party independent software vendors, and system integrators.

Note:

AE Services supports existing Communication Manager standalone implementations and Avaya Aura® Session Manager configurations with Communication Manager as an Access Server. AE Services does not support Communication Manager as a Feature Server.

AE Services runs on a Linux server and is tightly integrated with Communication Manager and Avaya Contact Center solutions. AE Services provides an open platform for supporting existing applications and serves as a catalyst for creating the next generation of applications and business solutions.

AE Services supports Antivirus and Malware installation on software-only deployment and the following Antivirus and Malware are tested in Avaya labs:

- McAfee
- Symantec
- ClamAV

ClamAV Antivirus is preinstalled on AE Services server for VMware and KVM deployment using OVA.

Branch Gateways

Branch Gateways work with Communication Manager software installed on any of the following servers to help deliver communication services to enterprises:

- S8300E
- Avaya Common Server
- Customer-provided server
- Infrastructure as a Service (IaaS)
- Avaya Solutions Platform 120 Appliance: Dell PowerEdge R640
- Avaya Solutions Platform 130 Appliance: Dell PowerEdge R640

Branch Gateways connect telephone exchange and data networking by routing data and VoIP traffic over the WAN or LAN. Branch Gateways provide support for IP, digital, and analog devices.

Branch Gateways are controlled by Communication Manager operating either as External Call Controller (ECC) or Internal Call Controller (ICC). In a configuration that includes both ICC and ECC, ICC acts as a survivable remote server (SRS). ICC takes over call control when ECC fails or the WAN link between the main office and the branch office is down.

Branch Gateways also provide the standard local survivability (SLS) when the connection to the primary ECC fails and an SRS is not available. This feature is available only for IPv4 setups.

G430 Branch Gateway

G430 Branch Gateway can support up to 150 users when deployed as a branch gateway in a medium to large enterprise. The configuration requires Communication Manager to be installed on the Avaya S8300E server or either of Dell R620, Dell R630, HP DL360 G8, HP DL360 G9, Avaya Solutions Platform 120, or Avaya Solutions Platform 130 servers, customer-provided server, Infrastructure as a Service (IaaS), or Software-only environment.

G450 Branch Gateway

G450 Branch Gateway supports up to 450 users in a medium to large enterprise and up to 2400 users when deployed as a campus gateway. Both configurations require Communication Manager to be installed on the Avaya S8300E server or either of Dell R620, Dell R630, HP DL360 G8, HP DL360 G9, Avaya Solutions Platform 120, or Avaya Solutions Platform 130 servers, customer-provided server, Infrastructure as a Service (IaaS), or Software-only environment.

Avaya Aura® Media Server overview

Avaya Aura® Media Server (MS) is a software-based media application platform. Avaya Aura® MS performs all multimedia processing using software rather than using dedicated hardware-based DSP resources. Avaya Aura® MS is designed to run on general purpose operating systems and Commercial Off-The-Shelf (COTS) hardware. Avaya Aura® MS forms the backbone of a flexible communications system for growing companies. Using Avaya Aura® MS, your company can take advantage of the increased functionality of an IP network without replacing the existing infrastructure. Avaya Aura® MS works with media gateways to provide a streamlined voice and data network throughout the enterprise. Avaya Aura® MS and media gateways provide a network built on an industry standard operating system that supports distributed IP networking and centralized call processing. The benefits of Avaya Aura® MS are increased productivity, efficiency, and economic benefits for the enterprise. As Avaya Aura® MS consolidates multiple systems into a single server, you can manage the entire communications infrastructure from one location. Avaya Aura® MS provides scalability, redundancy, and high availability.

Avaya Aura® MS supports SIP TLS, SRTP, VoiceXML 2.1, CCXML 1.0, MRCP, QOS Monitoring, Audio, Video, MLPP, IM, and Webpush features.

Avaya Aura® MS powers diverse applications such as voice messaging, consumer conferencing, self service, contact centers, basic media services, and communication applications.

Presence Services overview

Avaya Aura® Presence Services indicates the presence of a user through the presence states, such as Busy, Away, or Do Not Disturb. The presence is an indication of the availability of the user and the readiness to communicate across services, such as telephony, instant messaging (IM), and video.

The presentity is the visibility of a user on a shared communication network. The users who are a part of the presentity group have access to the presence status of another user. A watcher is a user who monitors the presentity of another user. The watcher must subscribe to Presence Services to receive presence updates for a presentity.

Presence Services supports collecting presence information from diverse sources. This information is aggregated for a user and then made available to the presence-aware applications. When an application subscribes to Presence Services, the application receives presence change notifications that contain the aggregated presence for a user and the communication resources available to the user. By using this information, the application can provide a visual indication about the presence of the user.

Presence Services is compatible with the client software from Microsoft®, IBM® Domino®, and open source. Users can utilize the following collectors to use the core Presence Services capabilities with other presence sources:

- AES collector: To collect telephony presence information from devices that are not presence capable, such as H323, and DCP endpoints administered as OPTIM extensions.
- Exchange collector: To collect the calendar and out-of-office information from Exchange mailboxes.
- Domino collector: To collect the calendar and out-of-office information from Domino mailboxes.

AVP Utilities overview

In Avaya Aura® Release 8.0, Utility Services is replaced by AVP Utilities. While some of the Utility Services features are migrated to other Avaya Aura® applications, the following features of Utility Services are migrated to AVP Utilities:

- Services Port access for virtual machines
- Appliance Virtualization Platform log collection and alarming
- SSH access for Appliance Virtualization Platform

The following features of Utility Services are migrated to other Avaya Aura® applications:

Features of Utility Services 7.x	Migrated to	Description
Enterprise System Directory (ESD)	Avaya Aura® System Manager 8.0 and later.	Only LDAP integration with Avaya Aura® System Manager is supported. Searching the LDAP directory is supported for SIP phones only.

Table continues…

Features of Utility Services 7.x	Migrated to	Description
File Server	Avaya Aura® Device Services 8.0 and later.	Avaya Aura® Device Services provides this feature for IP Phones, but not for Gateway Firmware. .
MyPhone	Avaya Aura® Unified User Portal 8.0 and later.	Existing configurations must be re-applied, if any.

You can use the following features of Utility Services through third-party applications:

Features of Utility Services 7.x	Description
Call Detail Recordings collection	You must use third-party applications. You can also use the Call Detail Recordings data with third-party solutions.
Dynamic Host Configuration Protocol (DHCP)	You must use a separate DHCP server.

Avaya Device Adapter Snap-in Overview

Avaya Device Adapter Snap-in is an Avaya Breeze® platform snap-in that acts as a protocol converter between UNIStim IP, digital, and analog devices and an Avaya Aura® solution. The Avaya Aura® solution services devices by converting the proprietary signaling to Avaya SIP.

Device Adapter enables deployed UNIStim IP, digital, and analog devices to be reused in an Avaya Aura® solution. It is a modular, reusable solution that enables Unified Networks IP Stimulus (UNIStim) IP, digital, and analog phones that are used as Unified Communications (UC) phones and that work with Avaya Communication Server 1000 (CS 1000) to migrate to Avaya Aura® without significant investment on the existing infrastructure. Device Adapter offers a feasible solution to CS 1000 customers to take advantage of Avaya Aura® features while minimizing expenses on the cables and hardware.

Device Adapter is deployed on the Avaya Breeze® platform. A Device Adapter node runs on an Avaya Breeze® platform cluster that can have one or more Avaya Breeze® platform servers. A standard deployment solution has one or more Avaya Breeze® platform clusters. Implementing Device Adapter does not introduce any new hardware. Device Adapter works as a part of the Avaya Breeze® platform solution.

In this deployment, phone sets are connected to Device Adapter by replacing CS 1000. For SIP signaling and terminal registration of phone sets, Device Adapter is connected to Avaya Aura® Session Manager. Session Manager communicates with Avaya Aura® Communication Manager to provide call-related services to the terminals. Device Adapter communicates with Avaya Aura® System Manager for management operations as available in a typical Avaya Aura® deployment.

To support analog and digital/TDM set migration, Media Gateway Controllers (MGC) or Media Gateway Extended Peripheral Equipment Controllers (MG-XPEC) must be in place to drive the Digital/Analog Line Cards. Only Intelligent Peripheral Equipment (IPE) Digital/Analog Line cards are supported.

Device Adapter support in an Avaya Aura® Call Center Elite environment

Device Adapter Release 8.1.2 supports migration of call center (CC) endpoints that are used in an Avaya Aura® Call Center Elite environment and that work with a CS 1000 environment to Avaya Aura®. Device Adapter retains the Call Center Elite functions on these endpoints and provides a near CS 1000 user experience to the call center agents and supervisors.

Device Adapter supports only 1140e (1140) IP phone and i2050 (2050) soft phone in a call center environment.

Customers can use these phones either as Unified Communications (UC) or Call Center (CC) phones in their call center environment. When a call center agent or supervisor logs in to the phone, the phone operates as a CC phone and provides the call center features. Otherwise, it operates as a UC phone. Customers can also use these phones exclusively as UC phones in their call center environment.

Device Adapter for call center does not support any services that are not supported by a 96x1 SIPCC endpoint.

Avaya Breeze® platform overview

Avaya Breeze® platform provides a virtualized and secure application platform where workflow developers and Java programmers can develop and dynamically deploy advanced collaboration capabilities. These capabilities extend the power of Avaya Aura®, Avaya Oceana®, and Avaya Professional Services custom development. Customers, Business Partners, and Avaya developers can use Avaya Breeze® platform to deploy snap-ins.

Avaya products are powered by Avaya Breeze® platform. It enables the user to do the following:

- Develop the snap-ins, without developing the platform to deploy and invoke snap-ins.
- Perform the following operations:
  - Intercept calls to and from the enterprise.
  - Redirect calls to an alternate destination.
  - Block calls and optionally play an announcement to the caller.
  - Change the caller ID of the calling or called party.
- Place an outbound call for playing announcements and collecting digits.
- Use web services for added functionality.
- Make webpages and web services available for remote browsers and applications.
- Add or replace trust and identity certificates for increased security.
- Create custom connectors that provide access to an external application or service.

Avaya Breeze® platform provides:

- Unified Communications and Contact Center customers and Business Partners the ability to deliver capabilities using the skill sets of enterprise and cloud application developers.
- A robust Software Development Kit (SDK) with an easy-to-use API. Developers need not understand the details of call processing to develop new capabilities.

- A Collaboration Bus that snap-ins can use to leverage capabilities through a point-to-point model and publish or subscribe to messaging patterns.
- A Common Data Manager framework that snap-ins can use to access common information stored on System Manager.
- Connector snap-ins that provide access to email and conferencing host applications.

  For the list of third-party developed snap-ins, go to https://www.devconnectmarketplace.com/marketplace/ and navigate to **Avaya Snapp Store**.
- Zang call connector to interact with Avaya OneCloud™ CPaaS.
- Zang SMS connector for snap-ins to interact with Avaya OneCloud™ CPaaS to send and receive messages.
- Tools that log and monitor operations and provide troubleshooting support.

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.

WebLM supports two configurations models:

- WebLM standard model. In this model, a single WebLM server supports one or more licensed products. The WebLM standard model supports the Standard License File (SLF) and Enterprise License File (ELF) types.
- WebLM enterprise model. This model includes multiple WebLM servers. One WebLM server acts as a master WebLM server and hosts the license file from PLDS. The remaining WebLM servers act as the local WebLM servers and host the allocation license files from the master WebLM server. You require an ELF to set up the WebLM enterprise model. PLDS generates license files that are SLFs or ELFs.

  Note:

  The master and local WebLM servers must be deployed on the same major release. The master WebLM server must be on same or latest service pack than the local WebLM server resides on.

  For example, if the local WebLM server is on Release 7.1, the master WebLM server must be on Release 7.1, 7.1.1, 7.1.2, or 7.1.3. The master WebLM server cannot be higher than Release 7.1.x.

You can purchase two products and choose the enterprise model of licensing for one product and the standard model of licensing for the other product. PLDS generates a separate license file for each product.

The license file is an SLF or ELF based on how the product is configured in PLDS. Verify the installation options that the product supports before you install the WebLM server. To configure the standard licensing, you can use an ELF or SLF. To configure enterprise licensing, you must have an ELF. After you install the license file on the WebLM server, a product with an ELF can

have multiple instances of the WebLM server. However, a product with an SLF can have only one instance of the WebLM server.

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.

Chapter 3: Planning and Preconfiguration

Pre-upgrade checklist

Perform the following tasks before upgrading Avaya Aura® application:

No.	Task	Notes	✔
1.	Verify the software version.	From the command line, run the command **`swversion`** and verify that the version number and build number are correct.	
2.	Verify the time zone and NTP server settings.		
3.	Register for PLDS and activate license entitlements. Ensure that you have the PLDS access credentials.	For more information about licensing, navigate to Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
4.	Ensure that sufficient disk space is available for the server that you have attached with the software library.		

Planning for upgrade

Planning checklist for Avaya Aura® Virtualized Environment

Planning checklist for VMware®

Use the following checklist to deploy or upgrade the Avaya Aura® application OVA by using vCenter and VSphere Web Client:

No.	Task	Notes	✔
1	From the Avaya Support website at http://support.avaya.com, download the Avaya Aura® application OVA.		

Table continues…

No.	Task	Notes	✔
2	Upload the software required for deployment and upgrade operations to the local or remote software library of Avaya Aura® application. For example, OVA, firmware, software patches, service packs, and images.		
3	Install vSphere Client 6.0, 6.5, 6.7, and 7.0. Gain access to vCenter and vSphere Web Client.	Download from the VMware website. **Note:** With VMware® vSphere ESXi 6.5, vSphere Web Client replaces the VMware vSphere Client for ESXi and vCenter administration.	
4	Keep a copy of the license files for the Avaya Aura® products in a local system so you can replicate with the new Host ID after the OVA file installation. Ensure that the license file copies are accessible from your local system.		
5	Ensure that the following information is handy: • FQDN/IP address, netmask, and gateway • Out of Band Management configuration details		

Note:

When you deploy or upgrade Avaya Aura® applications on Avaya Solutions Platform 130 Appliance make sure to:

- Update the Dell R640 BIOS and firmware to the latest release.
- Enable the iDRAC and connect it to an ethernet switch.

For information about deployment or upgrade of Avaya Aura® application on VMware, see the application specific deployment or upgrade guide.

Planning checklist for Kernel-based Virtual Machine

Complete the following tasks before deploying or upgrading the Avaya Aura® application on Kernel-based Virtual Machine:

No.	Task	Notes	✔
1.	Download the required software from PLDS.		
2.	Purchase and obtain the required licenses.		
3.	Register for PLDS and activate license entitlements. Ensure that you have the PLDS access credentials.	For more information about licensing, navigate to Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
4.	Prepare the site.	For more information, see the application specific deploying and upgrading guides.	

Planning checklist for Virtual Appliance

Complete the following tasks before upgrading or migrating the Avaya Aura® application on Virtual Appliance:

No.	Task	Notes	✔
1	Download the required software from PLDS.		
2	Purchase and obtain the required licenses.		
3	Register for PLDS and activate license entitlements. Ensure that you have the PLDS access credentials.	For more information about licensing, navigate to Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
4	Download the OVA files, ISO files, and feature pack files of Avaya Aura® applications that you want to deploy or upgrade from the Avaya Support website at http://support.avaya.com.	**Note:** For information about the upgrade sequence and the required patches, see the latest Avaya Aura® Release Notes on the Avaya Support website.	
5	Ensure that the following information is available: • FQDN/IP address, netmask, and gateway • Out of Band Management configuration details.		
6	For Virtual Appliance deployments, install the supported server.		

Table continues…

No.	Task	Notes	✔
7	Install Appliance Virtualization Platform on the server for applications, such as Avaya S8300E.	**Note:** • Appliance Virtualization Platform is preinstalled on Avaya Solutions Platform 120 Appliance server and Common Server Release 2 and 3. • Update the Dell R640 BIOS and firmware to the latest release. For information about upgrade or deployment for Avaya Aura® Virtualized Appliance, see the application specific upgrade or deployment guide.	

Planning checklist for Software-only environment

Complete the following tasks before deploying or upgrading the Avaya Aura® application on Software-only environment:

No.	Task	Notes	✔
1.	Download the required software from PLDS.		
2.	Purchase and obtain the required licenses.		
3.	Register for PLDS and activate license entitlements. Ensure that you have the PLDS access credentials.	For more information about licensing, navigate to Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
4.	Prepare the site by performing the following procedures: • Create a virtual machine on the supported virtualized environment. • Install the Red Hat Linux for the Software-Only deployment.	For more information, see the application specific deploying and upgrading guides.	

Planning checklist for Infrastructure as a Service

Complete the following tasks before deploying or upgrading the Avaya Aura® application on specific IaaS services management console:

No.	Task	Notes	✔
1	Download the required software from PLDS.		
2	Purchase and obtain the required licenses.		
3	Register for PLDS and activate license entitlements. Ensure that you have the PLDS access credentials.	For more information about licensing, navigate to Avaya Product Licensing and Delivery System at https://plds.avaya.com/.	
3	Ensure that the following information is available: • FQDN/IP address, netmask, and gateway • Out of Band Management configuration details.		
4	Log on to the specific IaaS services management console.		
5	Create a key pair.	Use key pair, which is a set of public and private keys to encrypt and decrypt data, such as login information, for example, the password. This key pair is used when you deploy an Avaya Aura® application on the cloud.	

Guidelines for upgrading platform and hypervisor

Ensure that you upgrade the platform and hypervisor before starting the upgrade.

- If the application is running on the server that is not supported with Release 8.1.x, then deploy Avaya Aura® Appliance Virtualization Platform and AVP Utilities on a supported server on latest release.

  For information about supported servers, see Supported servers for Avaya Aura applications on page 36.

- If the application is running on the ESXi version that is not supported with Release 8.1.x, then first upgrade the ESXi to a supported ESXi version.

  For information about the supported ESXi version, see Supported ESXi version on page 37.

  For information about upgrading ESXi, see the VMware product documentation.

- If ESXi is managed by vCenter, ensure that the vCenter version is same or higher than the ESXi version.

Downloading software from PLDS

Procedure

1. In your web browser, type http://plds.avaya.com to go to the Avaya PLDS website.
2. On the PLDS website, enter your Login ID and password.
3. On the Home page, select **Assets**.
4. Select **View Downloads**.
5. Click the search icon ( ) for Company Name.
6. In the Search Companies dialog box, do the following:
   a. In the **%Name** field, type `Avaya` or the Partner company name.
   b. Click **Search Companies**.
   c. Locate the correct entry and click the **Select** link.
7. Search for the available downloads by using one of the following:
   - In **Download Pub ID**, type the download pub ID.
   - In the **Application** field, click the application name.
8. Click **Search Downloads**.
9. Scroll down to the entry for the download file, and click the **Download** link.
10. Select a location where you want to save the file, and click **Save**.
11. **(Optional)** When the system displays the security warning, click **Install**.

    When the installation is complete, PLDS displays the downloads again with a check mark next to the downloads that have completed successfully.

Permissions

You must set appropriate permissions during upgrading the Avaya Aura applications in the settings to define the features that can be run from within the applications. User roles can be set for each application. These roles control the set of permissions that the user has in the application. Ensure that you set permissions that are required to perform all upgrade-related operations.

Software library

Using software library, you can store the software and firmware files that you download. After you download a firmware file in the Software Library, you can use the downloaded file across multiple devices.

With software library, you can also create, modify, view, and delete the firmware files.

For upgrading the firmware files, use an external server that functions as a remote software library. To upload the firmware files from System Manager, you must configure an FTP, SCP, or SFTP protocol for the external server.

Note:

- A local, non-editable software library, SMGR_DEFAULT_LOCAL, resides within System Manager post installation. You require only remote software library for upgrading TN boards and IP Office. For upgrading other elements, you can use a local or remote library.
- The system downloads the TN boards firmware files at home directory of the SCP user configured on the **SCP Configuration** tab of Remote SCP S/W Library irrespective of the path configured in the **Server Path** field on the **Library Server Details (L)** tab of the Add Software Library page.

Configuration tools and utilities

To deploy or upgrade the Avaya Aura® application OVA and to configure the applications, you need the following tools and utilities:

- A browser for administering Avaya Aura®applications.
- USB keyboard, USB mouse, video monitor, and cables or laptop computer with Ethernet crossover cable.
- An SSH client, for example, PuTTY and PuTTYgen.
- An SFTP client for Windows, for example WinSCP.

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.

Profile mapping for Communication Manager 6.3.x upgrades

Before you upgrade Communication Manager from Release 6.3.x to Release 8.1.3 ensure the correct footprints are available.

The footprint values apply for Communication Manager running on Appliance Virtualization Platform or on VMware.

Table 1: Summary of profile mapping

Communication Manager 6.x template	Communication Manager Release 8.1.3 deployment option	Resources
CM_onlyEmbed on S8300E	CM Main Max users 1000 Small Main supporting up to 1000 users	2vCPUs, 3900 MHz, 3584 Mb RAM
CM_SurvRemoteEmbed on S8300E	CM Survivable Max users 1000 Small Survivable supporting up to 1000 users	1vCPU, 1950 MHz, 3584 Mb RAM
CM as part of Midsize_Ent	CM Main Max users 2400 Medium Main only supporting up to 2400 users This profile is targeted as a migration path for Communication Manager on Midsize Enterprise.	2 vCPUs, 4400 MHz, 4096 Mb RAM
CM_Simplex	CM Main/Survivable Max users 41000 Large Main/Survivable supporting up to 41000 users	2 vCPUs, 4400 MHz, 4608 Mb RAM
CM_SurvRemote	CM Main/Survivable Max users 41000 Large Main/Survivable supporting up to 41000 users	2 vCPUs, 4400 MHz, 4608 Mb RAM
CM_Duplex	CM Duplex Max users 30000 Standard Duplex 30000 users	3 vCPUs, 6600 MHz, 5120 Mb RAM
CM_Duplex high capacity	CM High Duplex Max users 41000 High Duplex 41000 users	3 vCPUs, 7650 MHz, 5120 Mb RAM

Supported gateways

The following table lists the supported gateways of Avaya Aura® applications.

Supported gateways	Avaya Aura® Release				
	6.3.x	7.0.x	7.1.x	8.0.x	8.1.x
G250 Branch Gateway	Y	Y			
G350 Branch Gateway	Y	Y			
G430 Branch Gateway	Y	Y	Y	Y	Y
G450 Branch Gateway	Y	Y	Y	Y	Y
G650 Media Gateway	Y	Y	Y	Y	Y
G700 Branch Gateway	Y	Y			

Supported servers for Avaya Aura® applications

The following table lists the supported servers of Avaya Aura® applications.

Supported servers	Avaya Aura® Release			
	7.0.x	7.1.x	8.0.x	8.1.x
S8300D	Y	Y		
S8300E	Y	Y	Y	Y
HP ProLiant DL360 G7	Y	Y		
HP ProLiant DL360p G8	Y	Y	Y	Y
HP ProLiant DL360 G9	Y	Y	Y	Y
Dell™ PowerEdge™ R610	Y	Y		
Dell™ PowerEdge™ R620	Y	Y	Y	Y
Dell™ PowerEdge™ R630	Y	Y	Y	Y
Avaya Solutions Platform 120 Appliance: Dell PowerEdge R640 *			Y	Y
Avaya Solutions Platform 130 Appliance: Dell PowerEdge R640 **			Y	Y

*Avaya Solutions Platform 120 Appliance supports virtualization using Appliance Virtualization Platform.

**Avaya Solutions Platform 130 Appliance supports virtualization using VMware vSphere ESXi Standard License.

Note:

From Avaya Aura® Release 8.0 and later, S8300D, Dell™ PowerEdge™ R610, and HP ProLiant DL360 G7 servers are not supported.

Supported ESXi version

The following table lists the supported ESXi versions of Avaya Aura® applications.

ESXi version	Avaya Aura® Release			
	7.0.x	**7.1.x**	**8.0.x**	**8.1.x**
ESXi 5.0	Y			
ESXi 5.1	Y			
ESXi 5.5	Y	Y		
ESXi 6.0		Y	Y	Y
ESXi 6.5		Y	Y	Y
ESXi 6.7			Y	Y
ESXi 7.0				Starting from Release 8.1.3: Y

Note:

- VMware vSphere ESXi 6.0 and 6.5 supports vSphere Client for Windows as well as vSphere Web Client. However, with VMware vSphere ESXi 6.7 onwards, only HTML5 based vSphere Client is supported.
- Avaya Aura® applications support the ESXi version and its subsequent update. For example, the subsequent update of VMware ESXi 6.7 can be VMware ESXi 6.7 Update 3.
- Application Enablement Services Release 8.1.1 and 8.1.2 OVAs are supported on VMware 7.0.
- Device Adapter and Presence Services are deployed on the Avaya Breeze® platform, which supports VMware 6.5 and 6.7.

Upgrading VMware ESXi version

About this task

If the ESXi upgrade is required for upgrading the application to Release 8.1.x, use the following procedure to upgrade the ESXi to a supported ESXi version.

For information about the supported ESXi version, see Supported ESXi version on page 37.

Procedure

1. Shut down all the virtual machines that are hosted on the ESXi.
2. Put the ESXi into maintenance mode.

   For information about performing steps on ESXi, see VMware product documentation website.
3. Upgrade ESXi to supported ESXi version.

   For information about upgrading ESXi, see VMware product documentation website.
4. After upgrading the ESXi host, log in to the host UI, and exit from the ESXi maintenance mode.
5. Apply the license key for the upgraded ESXi.
6. Power on the virtual machines.

Upgrading Avaya Solutions Platform 130 from Release 4.0 to 5.0 with Avaya Aura® applications 8.1.x

About this task

Use the following procedure to upgrade the Avaya Solutions Platform 130 from Release 4.0 (Avaya Supplied ESXi 6.5) to Release 5.0 (Avaya Supplied ESXi 7.0) with Avaya Aura® Release 8.1.x applications installed on it.

Procedure

1. Take the backup of the Avaya Aura® application and keep it on remote servers.

   For information about taking the backup for each application, see the application-specific document.
2. To do the graceful shutdown of the application, log in to the host UI through vSphere Web Client, and do the following:

   a. Select the application, right-click, and then click **Guest OS** > **Shut down**.

      The system displays the following message:

      ```
      Are you sure you want to shut down <virtual_machine_name>.
      ```

   b. To proceed, click **Yes**.

   Note:

   - If you have a virtual machine on the host, Avaya recommends to do the graceful shutdown of the virtual machine.
   - For applications, such as Communication Manager and Session Manager, ensure that no calls are running on the system.

3. Upgrade Avaya Solutions Platform 130 from Release 4.0 to 5.0.

   For information about upgrading Avaya Solutions Platform 130 from Release 4.0 to 5.0, see Avaya Solutions Platform 130 Series: Upgrading to ESXi 7.0 u2 from ESXi 6.5.x.

   - If the Avaya Solutions Platform 130 upgrade is successful, power on the Avaya Aura® application and ensure the applications are up and running.

     If the Avaya Aura® applications are not up and running, go to step 4.
   - If the Avaya Solutions Platform 130 upgrade fails:

     a. Do the fresh deployment of Avaya Solutions Platform 130 Release 5.0.

        For information about installing Avaya Solutions Platform 130, see “Installing the Avaya Solutions Platform 130 Series”.

     b. Deploy the application at the same version that was before the Avaya Solutions Platform 130 upgrade.

        For information about deploying the application, see the application-specific deployment document.

     c. Restore the backup that is taken at step1 and ensure everything is working fine.

        For information about restoring the backup for each application, see the application-specific document.

4. **(Optional)** If the Avaya Aura® applications are not up and running:

   a. Do the fresh deployment of the application at the same version that was before the Avaya Solutions Platform 130 upgrade.

      For information about deploying the application, see the application-specific deployment document.

   b. Restore the backup that is taken at step1 and ensure everything is working fine.

      For information about restoring the backup for each application, see the application-specific document.

   Note:

   If multiple applications are on the same server, follow the upgrade order for restoring the backup.

Supported embedded Red Hat Enterprise Linux operating system versions of Avaya Aura® application OVAs

The following table lists the supported embedded Red Hat Enterprise Linux operating system versions of Avaya Aura® application OVAs.

Red Hat Enterprise Linux operating system	Avaya Aura® Release			
	7.0.x	7.1.x	8.0.x	8.1.x
Linux operating system Release 6.5 with 64-bit	Y **Note:** System Manager Release 7.0.x only supports the CentOS Operating System Release 6.5 with 64-bit.			
Linux operating system Release 7.2 with 64-bit		Y **Note:** Utility Services Release 7.1 uses the Red Hat Enterprise Linux operating system Release 7.3 with 64-bit.		
Linux operating system Release 7.4 with 64-bit			Y **Note:** System Manager Release 8.0.x only supports the Red Hat Enterprise Linux operating system Release 7.5 with 64-bit.	
Linux operating system Release 7.6 with 64-bit				Y

Supported Red Hat Enterprise Linux operating system versions for Software-only Environment

The following table lists the supported Red Hat Enterprise Linux operating system versions for deploying or upgrading Avaya Aura® applications in Software-only Environment.

Red Hat Enterprise Linux operating system	Avaya Aura® Release	
	8.0.x	**8.1.x**
Linux operating system Release 7.4 with 64-bit	Y **Note:** System Manager Release 8.0.x only supports the Red Hat Enterprise Linux operating system Release 7.5 with 64-bit.	
Linux operating system Release 7.6 with 64-bit		Y **Note:** Session Manager Release 8.1.1 and later support the Red Hat Enterprise Linux operating system Release 7.6 through 7.9 with 64-bit.

Licensing

When upgrading Avaya Aura® applications, you need a new Avaya Aura® application license file only when upgrading System Manager to Release 8.1.x, unless you use SDM client for the System Manager upgrade. For more information about licensing, see the application-specific upgrading documents.

IPv4 and IPv6

Avaya Aura applications support a dual stack architecture. You can install and upgrade applications using IPv4 and IPv6 addresses. You must use the IPv4 address.

Supported footprints and profiles

System Manager footprints

Supported footprints for System Manager on Appliance Virtualization Platform

The following table describes the resource requirements to support different profiles for System Manager on Appliance Virtualization Platform Avaya-Appliance offer.

Resource	Profile 2	Profile 3	Profile 4
vCPU Reserved	6	8	18
Minimum vCPU Speed	2185 MHz	2185 MHz	2185 MHz
CPU reservation	13110 MHz	17480 MHz	39330 MHz
Virtual RAM	12 GB	18 GB	36 GB
Virtual Hard Disk	105 GB	250 GB	850 GB
Number of users	>35000 to 250000 users with up to 250 Branch Session Manager and 12 Session Manager	>35000 to 250000 users with up to 500 Branch Session Manager and 28 Session Manager	>35000 to 300000 users with up to 5000 Branch Session Manager and 28 Session Manager
Common Server R2 and R3 support	Yes	Yes	Yes

Note:

- From Release 8.0 and later, System Manager Profile 1 is not supported. If System Manager is on a pre Release 8.0 and using the Profile 1, ensure that the server has the required resources to configure Profile 2 on Release 8.0 and later.
- System Manager Release 8.0 and later profile 2 does not support CSR2 Small Appliance Virtualization Platform Server. Therefore, if you are upgrading from System Manager Release 7.1 to Release 8.0 and later on Appliance Virtualization Platform, you must use CSR2 Medium Appliance Virtualization Platform Server. For more information about the Appliance Virtualization Platform CSR2 server types, see *Avaya Aura® Communication Manager Hardware Description and Reference*.

Supported footprints for System Manager on VMware

The following table describes the resource requirements to support different profiles for System Manager on VMware customer-provided Virtualized Environment.

Resource	Profile 2	Profile 3	Profile 4
vCPU Reserved	6	8	18
Minimum vCPU Speed	2185 MHz	2185 MHz	2185 MHz
CPU reservation	13110 MHz	17480 MHz	39330 MHz
Virtual RAM	12 GB	18 GB	36 GB
Memory reservation	12288 MB	18432 MB	36864 MB
Virtual Hard Disk	105 GB	250 GB	850 GB
Shared NICs	1	1	1
IOPS	44	44	44
Number of users	>35000 to 250000 users with up to 250 Branch Session Manager and 12 Session Manager	>35000 to 250000 users with up to 500 Branch Session Manager and 28 Session Manager	>35000 to 300000 users with up to 5000 Branch Session Manager and 28 Session Manager

Note:

From Release 8.0 and later, System Manager Profile 1 is not supported. If System Manager is on a pre Release 8.0 and using the Profile 1, ensure that the server has the required resources to configure Profile 2 on Release 8.0 and later.

Supported footprints for System Manager on KVM

Footprint	Profile 2	Profile 3	Profile 4
Number of vCPUs	6	8	18
RAM (GB)	12	18	36
HDD (GB)	105	250	850
NICs	1	1	1
Number of users	250000	250000	300000

Note:

From Release 8.0 and later, System Manager Profile 1 is not supported. If System Manager is on a pre Release 8.0 and using the Profile 1, ensure that the server has the required resources to configure Profile 2 on Release 8.0 and later.

Supported footprints of System Manager *Software-Only ISO image*

Footprint	CPUs (GHz)	Number of vCPUs	CPU reservation	RAM (GB)	Memory reservation	HDD (GB)	NICs	Number of users
Profile 2	2.29	6	13740	12	12288	105	1	250000
Profile 3	2.29	8	18320	18	18432	250	1	250000

Table continues…

Footprint	CPUs (GHz)	Number of vCPUs	CPU reservation	RAM (GB)	Memory reservation	HDD (GB)	NICs	Number of users
Profile 4	2.2	18	39600	36	39600	850	1	300000
For deploying System Manager *Software-Only ISO image* on VMware, Hyper-V, AWS, GCN, and Azure, you must configure the system with the following hard disk (GB) and in the same order: • **Profile 2:** HDD1: 44, HDD 2: 25, HDD3: 15, HDD4: 21 • **Profile 3:** HDD1: 150, HDD 2: 30, HDD 3: 20, HDD4: 50 • **Profile 4:** HDD1: 650, HDD 2: 30, HDD 3: 20, HDD4: 150 For deploying System Manager *Software-Only ISO image* on KVM, you must configure the system with the following hard disk (GB): • **Profile 2:** HDD: 105 • **Profile 3:** HDD: 250 • **Profile 4:** HDD: 850								

Supported footprints for the System Manager on AWS

Footprint	Profile 2	Profile 3	Profile 4
AWS OVA instance type	m4.2xlarge or higher	m4.2xlarge or higher	m4.10xlarge or higher
AWS ISO instance type	m4.2xlarge or higher, m5.2xlarge, m5a.2xlarge, c5a.2xlarge, or c5.2xlarge	m4.2xlarge or higher, m5.2xlarge, m5a.2xlarge, c5a.4xlarge, or c5.2xlarge	m4.10xlarge or higher, m5.8xlarge, m5a.8xlarge, c5.9xlarge, or c5a.8xlarge
HDD (GB)	Total: 105 • HDD1: 44 • HDD2: 25 • HDD3: 15 • HDD4: 21	Total: 250 • HDD1: 150 • HDD2: 30 • HDD3: 20 • HDD4: 50	Total: 850 • HDD1: 650 • HDD2: 30 • HDD3: 20 • HDD4: 150
NICs	1	1	1

Note:

From Release 8.0 and later, System Manager Profile 1 is not supported. If System Manager is on a pre Release 8.0 and using the Profile 1, ensure that the server has the required resources to configure Profile 2 on Release 8.0 and later.

Supported footprints of System Manager ISO on Google Cloud Platform

Footprint	Profile 2	Profile 3	Profile 4
vCPU	6	8	18
RAM (GB)	12	18	36
HDD (GB)	Total: 105 • HDD1: 44 • HDD2: 25 • HDD3: 15 • HDD4: 21	Total: 250 • HDD1: 150 • HDD2: 30 • HDD3: 20 • HDD4: 50	Total: 850 • HDD1: 650 • HDD2: 30 • HDD3: 20 • HDD4: 150
NICs	1	1	1

Supported footprints of System Manager ISO on Microsoft Azure

Footprint	Profile 2	Profile 3	Profile 4
Instance type	D4_v2 (Standard) or higher	D4_v2 (Standard) or higher	D16_v3 (Standard) or higher
HDD (GB)	Total: 105 • HDD1: 44 • HDD2: 25 • HDD3: 15 • HDD4: 21	Total: 250 • HDD1: 150 • HDD2: 30 • HDD3: 20 • HDD4: 50	Total: 850 • HDD1: 650 • HDD2: 30 • HDD3: 20 • HDD4: 150
NICs	1	1	1

Communication Manager footprints

Supported footprints of Communication Manager Software-only ISO image on on-premise

These footprint values are applicable for Software-Only deployments on:

- VMware
- KVM
- Hyper-v

Footprint (Max users)	vCPU	CPU Reservation (MHz)	Memory (MB)	Hard disk (GB)	Minimum CPU Speed (MHz)	Extra NICs
CM Main Max users 1000	2	3900	3584	64	1950	0
CM Survivable Max users 1000	1	1950	3584	64	1950	0
CM Simplex1 Max users 2400	2	4340	4096	64	2170	0
CM Simplex2 Max users 41000 (Can be used as Main or Survivable)	2	4340	4608	64	2170	0
CM Duplex Max users 30000 (CM Duplex – Main or Survivable – up to 30,000 users)	3	6510	5120	64	2170	1
CM High Duplex Max users 41000 (For Hi-Duplex Servers for Main or survivable)	3	7650	5120	64	2550	1

Supported footprints of Communication Manager on KVM

Product name	Footprint (Max users)	Minimum CPU Speed (MHz)	Number of vCPUs	CPU Reservation (MHz)	RAM (MB)	Hard Disk (GB)	NICs
Communication Manager Simplex	41000	2200	2	4340	4608	64	2
Communication Manager Duplex	30000	2200	3	6510	5120	64	3
Communication Manager Hi Duplex	41000	2600	3	7650	5120	64	3

Note:

NICs must be in bridge mode.

Supported footprints of Communication Manager on Amazon Web Services

Communication Manager OVA deployment on Amazon Web Services is only supported on the m4.large instance.

Product name	Footprint (Max users)	AWS OVA instance type	AWS ISO instance type	HDD (GB)	NICs
Communication Manager Simplex	41000	m4.large	m4.large, m5.large, or m5a.large	64	2
Communication Manager Duplex	41000	c4.xlarge	c4.xlarge, c5.xlarge, or c5a.xlarge	64	3

Note:

AMI installation is supported only in XEN-based EC2 instances.

Supported footprints of Communication Manager ISO on Infrastructure as a Service

Here are supported footprints of Communication Manager ISO on:

- Amazon Web Services
- Microsoft Azure
- Google Cloud Platform

Note:

On Google Cloud Platform, Communication Manager supports simplex deployment only.

Footprints	Configuration					
	Communication Manager Simplex				Communication Manager Duplex	
	Large	Medium	Small Main	Small Survivable	Duplex High	Duplex Standard
CPUs	2	2	2	1	3	3
Min CPU Speed (MHz)	2200 (4400 total)	2200 (4400 total)	2000 (4000 total)	2000 (2000 total)	2600 (7800 total)	2200 (6600 total)
Memory (MB)	4608	4096	3584	3584	5120	
Number of Ethernet NICs (OOB is optional)	2 - procr (eth0), OOB (eth1)				3 - procr (eth0), dup link (eth1), OOB (eth2)	
Min Disk size (GB)	64				64	

Session Manager footprints

Supported footprints for Session Manager

The following table summarizes single Session Manager capacities for all Session Manager footprints:

Session Manager Device Footprints	Up to 2K Devices	2K to 4.5K Devices	4.5K to 7K Devices	7K to 10K Devices (R1 footprint)	10K to 23.3K Devices (R2 footprint)	23.3K to 66.7K Devices
CPU Minimum	2200MHz, Hyper-threaded					
vCPUs	3	5	8	12	20	53
CPU MHz Reservation **Note:** Reservations are applicable to VMware only.	3300	5500	8800	13200	22000	58300
Memory Reservation	4916 MB	7376 MB	9832 MB	12288 MB	22120 MB	67584 MB
AWS Machine (OVA)	c4.xlarge	c4.2xlarge	c4.2xlarge	c4.4xlarge	c4.8xlarge	c5.18xlarge
AWS Machine (ISO Image)	• c4.xlarge • c5.xlarge • c5a.xlarge	• c4.2xlarge • c5.2xlarge • c5a.2xlarge	• c4.2xlarge • c5.2xlarge • c5a.2xlarge	• c4.4xlarge • c5.4xlarge • c5a.4xlarge	• c4.8xlarge • c5a.8xlarge	• c5.18xlarge • c5a.16xlarge
SIP Devices[1] (Normal/ Failure)[2]	2K/2.4K	4.5K/5K	7K/8K	10K/12K	23.3K/ 25K	66.7K/72K
CC Agents (Normal/Failure)	1.6K/2K	3.75K/4166	5.8K/6666	8333/10K	18K/21K	21.6K/25.2K
Presence Users (Normal/Failure)	2K/2.4K	4.5K/5K	7K/8K	10K/12K	18K/21K	21.6K/25.2K
Sessions (Sec/ Hour/Max)	20/72K/ 17.9K	45/162K/ 37.4K	70/256K/ 59.8K	100/360K/90K	150/540K/ 170K	180/648K/ 510K

Table continues…

Session Manager Device Footprints	Up to 2K Devices	2K to 4.5K Devices	4.5K to 7K Devices	7K to 10K Devices (R1 footprint)	10K to 23.3K Devices (R2 footprint)	23.3K to 66.7K Devices
HDD for AWS, VMware, or KVM OVA (GB)	• Disk 1: 50 • Disk 2: 10 • Disk 3: 30 Total: 90	• Disk 1: 50 • Disk 2: 10 • Disk 3: 30 Total: 90	• Disk 1: 55 • Disk 2: 25 • Disk 3: 40 Total: 120	• Disk 1: 55 • Disk 2: 25 • Disk 3: 40 Total: 120	• Disk 1: 85 • Disk 2: 50 • Disk 3: 65 Total: 200	• Disk 1: 85 • Disk 2: 50 • Disk 3: 65 Total: 200
HDD (GB) (If the deployment is using Solutions Deployment Manager)	90	90	120	120	200	200
Encrypted Core Session Manager (8.1 E OVA) HDD for VMware (GB)	• Disk 1: 35 • Disk 2: 55 Total: 90	• Disk 1: 35 • Disk 2: 55 Total: 90	• Disk 1: 40 • Disk 2: 80 Total: 120	• Disk 1: 40 • Disk 2: 80 Total: 120	• Disk 1: 60 • Disk 2: 140 Total: 200	• Disk 1: 60 • Disk 2: 140 Total: 200
HDD for Software-Only ISO (GB)[3]	90	90	120	120	200	200

Note:

1. SIP devices: It includes all hard endpoints, soft clients, AST/Non-AST SIP endpoints and third-party endpoints.
2. Normal/Failure: Normal refers to capacity of the Session Manager in Sunny Day scenario and Failure refers to capacity of the Session Manager in Rainy Day scenario. A Session Manager in a rainy day scenario can have more number of users registered as it has registrations from the users whose primary Session Manager is down.
3. You can deploy the Session Manager software-only *ISO image* on VMware, KVM, Nutanix, Hyper-V, Amazon Web Services, Google Cloud Platform, and Microsoft Azure platforms.

Supported footprints for Session Manager on Amazon Web Services

Supported footprints of Session Manager OVA on Amazon Web Services

Footprint	AWS instance type	HDD (GB)	NICs
Profile 1	c4.xlarge or higher	90 • Disk 1: 50 • Disk 2: 10 • Disk 3: 30	2
Profile 2	c4.2xlarge or higher	90 • Disk 1: 50 • Disk 2: 10 • Disk 3: 30	2
Profile 3	c4.2xlarge or higher	120 • Disk 1: 55 • Disk 2: 25 • Disk 3: 40	2
Profile 4	c4.4xlarge or higher	120 • Disk 1: 55 • Disk 2: 25 • Disk 3: 40	2
Profile 5	c4.8xlarge or higher	200 • Disk 1: 85 • Disk 2: 50 • Disk 3: 65	2
Profile 6	c5.18xlarge or higher	200 • Disk 1: 85 • Disk 2: 50 • Disk 3: 65	2

Supported footprints of Session Manager ISO on Amazon Web Services

Footprint	AWS instance type	HDD (GB)	NICs
Profile 1	• c4.xlarge or higher • c5.xlarge or higher • c5a.xlarge or higher	90	2
Profile 2	• c4.2xlarge or higher • c5.2xlarge or higher • c5a.2xlarge or higher	90	2
Profile 3	• c4.2xlarge or higher • c5.2xlarge or higher • c5a.2xlarge or higher	120	2
Profile 4	• c4.4xlarge or higher • c5.4xlarge or higher • c5a.4xlarge or higher	120	2
Profile 5	• c4.8xlarge or higher • c5a.8xlarge or higher	200	2
Profile 6	• c5.18xlarge or higher • c5a.16xlarge or higher	200	2

Supported footprints for Avaya Aura® Session Manager on Google Cloud Platform

Product name	Footprint (Devices)	vCPU	RAM	HDD (GB)	NICs
Session Manager Profile 1	Up to 2k	3	4916 MB	90	2
Session Manager Profile 2	Up to 4.5k	5	7376 MB	90	2
Session Manager Profile 3	Up to 7k	8	9832 MB	120	2
Session Manager Profile 4	Up to 10k	12	12288 MB	120	2
Session Manager Profile 5	Up to 23.3k	20	22120 MB	200	2
Session Manager Profile 6	Up to 66.7k	53	67584 MB	200	2

Supported footprints for Avaya Aura® Session Manager on Microsoft Azure

Product name	Footprint (Devices)	vCPU	RAM	HDD (GB)	NICs
Session Manager Profile 1	Up to 2k	3	4916 MB	90	2
Session Manager Profile 2	Up to 4.5k	5	7376 MB	90	2
Session Manager Profile 3	Up to 7k	8	9832 MB	120	2
Session Manager Profile 4	Up to 10k	12	12288 MB	120	2
Session Manager Profile 5	Up to 23.3k	20	22120 MB	200	2
Session Manager Profile 6	Up to 66.7k	53	67584 MB	200	2

Application Enablement Services footprints

AE Services resource requirements and the supported footprints

The following tables show the resource requirements and the supported footprints for deploying AE Services using the following platforms:

- ISO: Hyper-V, Microsoft Azure, Google Cloud Platform
- OVA: Kernel-based Virtual Machine (KVM), VMware, Appliance Virtualization Platform

Note:

You can use KVM OVA for deploying AE Services on OpenStack, Red Hat Virtualization Manager(RHVM) and Nutanix.

Footprints	Profile 1	Profile 2	Profile 3
vCPUs	1	2	4
CPU MHz Reservation **Note:** Reservations are applicable to VMware only.	2190 MHz	4380 MHz	8760 MHz
RAM	4 GB	4 GB	6 GB
HDD	30 GB	30 GB	30 GB
NICs	1	1	1
IOPS	6	6	6
Network usage	75 Kbps	75 Kbps	75 Kbps

		DMCC — Third party call control: Microsoft OCS/ Lync, and Avaya Aura® Contact Center		DMCC — First Party call control		TSAPI, DLG, CVLAN
Profile	**Footprint**	**Maximum number of users or agents**	**Maximum BHCC**	**Maximum number of users or agents**	**Maximum BHCC**	**Maximum Messages per second (MPS) Rate**
Profile 1	**1 CPU and 4 GB RAM**	1K 10K	20K BHCC 6K BHCC	1K	9K BHCC	1K MPS
Profile 2	**2 CPU and 4 GB RAM**	2.5K 12K	50K BHCC 12K BHCC	2.4K	18K BHCC	1K MPS
Profile 3	**4 CPU and 6 GB RAM**	5K 20K	100K BHCC 24K BHCC	8K	36K BHCC	2K MPS

Supported footprints for AE Services on AWS

AES Deployment Type	Footprint	AWS ISO instance type	HDD (GB)	NICs
AES (Software only)	Profile 1	m3.medium or higher	30 GB	2
AES (Software only)	Profile 2	c4.large or higher, c5a.large, or c5.large	30 GB	2
AES (Software only)	Profile 3	c3.xlarge or higher, c5a.xlarge, or c5.xlarge	30 GB	2

WebLM footprints

Supported footprints for WebLM Server

These footprints are common for Appliance Virtualization Platform, VMware, and KVM.

Resource	Profile 1	Profile 2
vCPU	1	1
CPU reservation	• **Appliance Virtualization Platform and VMware:** 2185 MHz • **KVM:** 2185 MHz	• **Appliance Virtualization Platform and VMware:** 2185 MHz • **KVM:** 2185 MHz
Memory reservation	1GB	2GB
Storage reservation	40GB	40GB
Shared NICs	1	1

Note:

If you use the WebLM server to acquire licenses for more than 5000 clients, use Profile 2.

Supported footprints of Avaya WebLM

These footprints are common for deploying Avaya WebLM:

- Software-Only ISO image on VMware, KVM, Hyper-V, AWS, GCN, or Azure.
- AWS OVA.

Avaya WebLM footprints	Profile 1	Profile 2
AWS OVA instance type	t2.medium	t2.medium
AWS instance type for ISO	t2.medium, c5.large, c5a.large, m5.large, or m5a.large	t2.medium, c5.large, c5a.large, m5.large, or m5a.large
Azure instance type	D2s_v3 (Standard)	D2s_v3 (Standard)
vCPU	1	1
CPU reservation	2290 MHz	2290 MHz
RAM (GB)	1 GB	2 GB
Memory Reservation	1 GB	2 GB
HDD (GB)	40	40
NICs	1	1

Chapter 4: Key Customer Configuration Information

Customer configuration data for System Manager

The following table identifies the key customer configuration information that you must provide throughout the deployment and configuration process:

Keep a copy of the license files for the Avaya Aura® products so you can replicate with the new Host ID after the OVA file installation.

Important:

Password must be 8 to 256 alphanumeric characters and without white spaces.

Required data	Description	Example Value for the system	✔
IP address	Management (Out of Band Management) and Public network configuration Configure Public network details only when Out of Band Management is enabled. If Out of Band Management is not enabled, Public network configuration is optional.	172.16.1.10	
Netmask		255.255.0.0	
Gateway		172.16.1.1	
DNS Server IP address		172.16.1.2	
Short hostname		myhost. The host name must be a valid short name. **Note:** System Manager hostname is case sensitive. The restriction applies only during the upgrade of System Manager.	
Domain name		mydomain.com	
Default search list		mydomain.com	
NTP server		172.16.1.100	
Time zone		America/Denver	
VFQDN short hostname	VFQDN	grsmgr	
VFQDN domain name		dev.com	

Table continues…

Required data	Description	Example Value for the system	✔
User Name Prefix	SNMP Parameters	org	
Authentication Protocol Password		orgpassword	
Privacy Protocol Password		orgpassword	
Backup Definition parameters	See Backup Definition Parameters	-	
EASG status	EASG	Enable or Disable	
Data Encryption	Data Encryption	Enable or Disable	

Customer configuration data for Communication Manager

The following table identifies the key customer configuration information that you must provide throughout the upgrading and configuration process:

Required data	Description	Example value for the system	✔
Hostname or fully-qualified domain name	Hostname or fully-qualified domain name for the virtual machine.	aesserver1	
IP address	IP address of the WebLM interface.	For IPv4: 192.168.x.x For IPv6: 2001:0db8::a	
Netmask	The network address mask	255.255.0.0	
Default Gateway	The default network traffic gateway	For IPv4: 172.16.x.x For IPv6: 2001:0db8::1	
DNS IP Address	The IP address of the primary DNS server	For IPv4: 172.16.x.x For IPv6: 2001:0db8::5	
Domain Name	The domain name, which must be a fully qualified domain name	abc.mydomain.com	
Default Search List	The domain name string that is used for default search	abc.mydomain.com	
NTP Server	The IP address of the NTP server	For IPv4: 172.16.x.x For IPv6: 2001:0db8::b	
Time Zone	The time zone you want to choose	America/Denver	

Table continues…

Required data	Description	Example value for the system	✔
EASG status	EASG	Enable or Disable	
Data Encryption	Data Encryption	Enable or Disable	

Customer configuration data for Session Manager

The following table identifies the required customer configuration information for deployment and configuration. An asterisk (*) indicates a required field.

Configuration Data	Field	Example value for the System	✔
Network Settings	Short hostname*	example-sm-1	
	Network domain*	Mycompany.com	
	IPv4 address*		
	Netmask*		
	Default gateway*		
	IPv6 address		
	IPv6 prefix		
	IPv6 gateway		
System Time Settings	Local time zone*		
	NTP server(s) Comma-separated list, up to 3 servers	Timeserver.ex.com,TS1.ex2.com	
DNS Settings	DNS server(s) Comma-separated list, up to 3 servers	123.4.56.789,142.67.2.123	
	Search Domain List Comma-separated list	avaya.com	
System Manager Settings	Primary System Manager IP address*		
	Enrollment password* **Note:** Verify the enrollment password is active.		
Login Settings	Login Name*		
	Password*		

Table continues…

Configuration Data	Field	Example value for the System	✔
Survivable Remote **Note:** This configuration data is only for Branch Session Manager.	• **LSP IPv4** • **LSP IPv6** **Note:** This field takes either of the two values.		
EASG status	EASG	Enable or Disable	
Data Encryption	Data Encryption	Enable or Disable	

Customer configuration data for Application Enablement Services

The following table identifies the key customer configuration information that will be required throughout the deployment and configuration process for Application Enablement Services.

Required Data	Description	Example value for the system	✔
Hostname or fully-qualified domain name	Hostname or fully-qualified domain name for the virtual machine.	aesserver1	
DNS	DNS search path. **Note:** If you leave this value blank, modify or add the line `search` *<dns search path>* in the file `etc/resolv.conf` after you deploy the Application Enablement Services virtual machine successfully.	example.com	
Default Gateway	Default gateway address for the virtual machine.	123.45.67.254	
DNS IP Address	Domain name servers for the virtual machine.	123.45.1.2	
IP address	IP address for the virtual machine interface for eth0 (Public interface).	123.45.67.89	
Netmask	Netmask or prefix for the virtual machine interface for eth0 (Public interface).	255.255.255.0	
IP address	IP address for the virtual machine interface for eth1 (Private interface) (optional).	123.45.67.90	

Table continues…

Required Data	Description	Example value for the system	✔
Netmask	Enter the Netmask or prefix for the virtual machine interface for eth1 (Private interface) (optional).	255.255.255.0	
IP address	IP address for the virtual machine interface for eth2 (optional).	For IPv4: 192.168.x.x For IPv6: 2001:0db8::a	
Netmask	Netmask or prefix for the virtual machine interface for eth2 (optional).	255.255.0.0	
NTP Server	Network Time Protocol (NTP) hostname or IP address (optional).	For IPv4: 172.16.x.x For IPv6: 2001:0db8::b	
EASG status	EASG	Enable or Disable	
Data Encryption	Data Encryption	Enable or Disable	

Note:

- DHCP will not take effect until you configure it from the command line after initial deployment.
- Do not expect Application Enablement Services to initiate DHCP on first boot.
- Avaya recommends that you do not use DHCP with Application Enablement Services.

Customer configuration data for WebLM

The following table identifies the key customer configuration information that you must provide throughout the deployment and configuration process.

Required data	Description	Example value for the system	✔
IP address	The IP address of the WebLM interface.	For IPv4: 192.168.x.x For IPv6: 2001:0db8::a	
Netmask	The network address mask.	255.255.0.0	
Default Gateway	The default network traffic gateway.	For IPv4: 172.16.x.x For IPv6: 2001:0db8::1	
DNS IP Address	The IP address of the primary DNS server.	For IPv4: 172.16.x.x For IPv6: 2001:0db8::5	
Domain Name	The domain name which must be a fully qualified domain name.	abc.mydomain.com	
Short HostName	-	weblm	

Table continues…

Required data	Description	Example value for the system	✔
Default Search List	The domain name string that is used for default search.	abc.mydomain.com	
NTP Server	The IP address of the NTP server.	For IPv4: 172.16.x.x For IPv6: 2001:0db8::b	
Time Zone	The time zone you want to choose.	America/Denver	
CLI User details	The command line interface user details.	abcd	
Admin UI password	The admin UI password.		
EASG	Enhanced Access Security Gateway		
Customer root account details	The customer root account details.		

Chapter 5: Upgrade Sequence and Paths

Upgrade sequence for Avaya components

You must upgrade Avaya components and solution in the following sequence. If any of the components are not part of your solution, you can skip that particular component and move to the next component.

1. Hard Endpoints (H.323 and SIP)

   You can upgrade endpoints after all Avaya Aura® Platform components are upgraded.

2. Standalone Avaya WebLM.
3. Avaya Aura® Appliance Virtualization Platform that hosts System Manager

   Appliance Virtualization Platform of individual components must be upgraded first.

   Note:

   - If you are upgrading Avaya Aura® Appliance Virtualization Platform from Release 7.x to 8.x, Solution Deployment Manager also upgrades Utility Services to AVP Utilities during the Avaya Aura® Appliance Virtualization Platform upgrade.
   - If you are upgrading Avaya Aura® Appliance Virtualization Platform from Release 8.0.x to 8.1.x, you need to manually upgrade AVP Utilities after upgrading Avaya Aura® Appliance Virtualization Platform.

4. AVP Utilities
5. SAL Gateway

   You can choose to upgrade SAL Gateway after all components are upgraded.

6. Avaya Aura® System Manager includes System Manager WebLM and System Manager Solution Deployment Manager.

   In the:

   - Non-Geography Redundancy setup, update standalone System Manager.
   - Geography Redundancy setup, update the primary System Manager.

   Avaya recommends that you use System Manager to update Avaya Aura® applications.

7. Avaya Device Adapter Snap-in on Avaya Breeze® platform
8. Avaya Aura® Session Manager (Core Session Managers only)
9. Avaya Breeze® platform and other Snap-ins
10. Avaya Call Management System

11. Avaya Experience Portal
12. Avaya Oceana®
13. Avaya Aura® Device Services
14. G4XX Media gateways or Avaya Aura® Media Server

    Note:

    For S8300E, the Gateway must be on minimum version 33.x.
15. Avaya Aura® Branch Session Manager
16. Avaya Aura® Application Enablement Services
17. Avaya Aura® Communication Manager Survivable Remote Servers (formerly known as Local Survivable Processors)
18. Avaya Aura® Presence Services Snap-in on Avaya Breeze® platform
19. Avaya Aura® Communication Manager Survivable Core Servers (formerly known as Enterprise Survivable Processors)
20. Avaya Aura® Communication Manager feature servers and evolution servers

    In duplex configuration, update the:

    - Standby Communication Manager server
    - Active Communication Manager server
21. Avaya IP Office™ platform
22. Avaya Aura® Messaging or IX Messaging (formerly known as Avaya Messaging)
23. Avaya Aura® Web Gateway
24. Equinox Clients

    Clients are dependent on Avaya Aura® Device Services in Avaya Aura® Platform.
25. Avaya Equinox® Conferencing
26. Avaya Session Border Controller for Enterprise

Note:

- System Manager is an integral part of the Avaya Aura® solution.
- 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 8.1 before you upgrade Communication Manager to 8.1.

  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.
- Remove the old Solution Deployment Manager Client and install the latest Solution Deployment Manager Client.

  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 8.1

OVA, Solution Deployment Manager Client version must be on Release 8.1. Solution Deployment Manager Client cannot be on Release 8.0.

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

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

Supported upgrade paths for System Manager

The following table displays all the upgrade paths from earlier releases to Release 8.1.x.

Note:

- Before starting the application upgrade, upgrade the platform and hypervisor.
- For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.
- Upgrade or migration using Solution Deployment Manager is only supported with same IP Address of the application in Software-only environment.

  Software-only upgrade is supported for VMware, KVM, Nutanix, RHVH, OpenStack, Hyper-V, AWS, GoogleCloud, and Azure.
- If the application supports the upgrade by using Solution Deployment Manager, you can also use the CLI for upgrading that application.

For information about terms used in the following table, see “Glossary”.

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/OpenStack/ Nutanix/RHVH 8.1.x (OVA)
AVP	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI

Table continues…

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/OpenStack/ Nutanix/RHVH 8.1.x (OVA)
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
VMware	6.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
KVM	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
Software-only	8.0.x	Migration using SDM	NA	NA	NA	NA
AWS	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
System Platform	6.x	Migration using SDM	Migration using SDM	Migration using SDM	Migration using CLI	Migration using CLI

Supported upgrade paths for Communication Manager

The following table displays all the upgrade paths from earlier releases to Release 8.1.x.

Note:

- Before starting the application upgrade, upgrade the platform and hypervisor.

- For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.
- Upgrade or migration using Solution Deployment Manager is only supported with same IP Address of the application in Software-only environment.

  Software-only upgrade is supported for VMware, KVM, Nutanix, RHVH, OpenStack, Hyper-V, AWS, GoogleCloud, and Azure.
- It is recommended that during manual upgrade process, you use xln backup and **`save translations`** method where server hardware (upgrade platform or environment) or operating system or hypervisor is changed.

For information about terms used in the following table, see “Glossary”.

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/ OpenStack/ Nutanix/ RHVH 8.1.x (OVA)
AVP	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
VMware	6.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI

Table continues…

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/ OpenStack/ Nutanix/ RHVH 8.1.x (OVA)
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using SMI	Migration using SMI
KVM	7.1.x	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI
	8.0.x	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI
Software-only	8.0.x	Migration using SDM	NA	NA	NA	NA
AWS	7.1.x	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI
	8.0.x	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI	Migration using SMI
System Platform	6.3.x	Migration using SDM	Migration using SDM	Migration using SDM	Migration using SMI	Migration using SMI

Supported upgrade paths for Session Manager

The following table displays all the upgrade paths from earlier releases to Release 8.1.x.

Note:

- Before starting the application upgrade, upgrade the platform and hypervisor.
- For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.
- Upgrade or migration using Solution Deployment Manager is only supported with same IP Address of the application in Software-only environment.

  Software-only upgrade is supported for VMware, KVM, Nutanix, RHVH, OpenStack, Hyper-V, AWS, GoogleCloud, and Azure.
- If the application supports the upgrade by using Solution Deployment Manager, you can also use the CLI for upgrading that application.

For information about terms used in the following table, see “Glossary”.

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/ OpenStack /Nutanix/ RHVH 8.1.x (OVA)
AVP	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
VMware	6.3.22	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
KVM	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
Software-only	8.0.x	Migration using SDM	NA	NA	NA	NA
AWS	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
SM on Bare Metal	6.3.22	Migration using SDM	Migration using SDM	Migration using SDM	Migration using CLI	Migration using CLI
BSM on System Platform	6.3.22	Migration using SDM	Migration using SDM	Migration using SDM	Migration using CLI	Migration using CLI

Supported upgrade paths for Application Enablement Services

The following table displays all the upgrade paths from earlier releases to Release 8.1.x.

Note:

- Before starting the application upgrade, upgrade the platform and hypervisor.
- For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.
- Upgrade or migration using Solution Deployment Manager is only supported with same IP Address of the application in Software-only environment.

  Software-only upgrade is supported for VMware, KVM, Nutanix, RHVH, OpenStack, Hyper-V, AWS, GoogleCloud, and Azure.
- To implement fully automated upgrade from Release 7.0 Appliance Virtualization Platform to Release 8.1.x Appliance Virtualization Platform, ensure that you log in to Avaya Aura® Application Enablement Services web console as root user and execute the command `chage -I -1 -m 0 -M 99999 -E -1 -W 7 csadmin` before starting the upgrade.
- For upgrading to Application Enablement Services Release 8.1.3 Feature Pack (FP) in software-only environment, you must install Application Enablement Services Release 8.1 or Release 8.1.1 ISO in a software-only environment, upgrade it to Release 8.1.2.x FP and then upgrade to Release 8.1.3 FP.
- For upgrading to Application Enablement Services Release 8.1.3 FP using OVA, you must install Application Enablement Services Release 8.1.2 OVA and then upgrade to Release 8.1.3 FP.
- For upgrading to Application Enablement Services Release 8.1.3 FP using 8.1 OVA or 8.1.1 OVA, perform one of the following:
  - Install Release 8.1 OVA with 8.1 LSU2 patch installed, upgrade to Release 8.1.2.x FP and then upgrade to Release 8.1.3 FP
  - Install Release 8.1.1 OVA with 8.1.1 LSU2 patch installed, upgrade to Release 8.1.2.x FP and then upgrade to Release 8.1.3 FP

For information about terms used in the following table, see “Glossary”.

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x	To KVM/ OpenStack/ Nutanix/RHVH 8.1.x (OVA)
Software-only	6.3.3	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console

Table continues…

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x	To KVM/ OpenStack/ Nutanix/RHVH 8.1.x (OVA)
	7.0.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
	7.1.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
	8.0.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
AVP	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
VMware	6.3.3	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using AES web console	Migration using AES web console
KVM	7.1.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console

Table continues…

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x	To KVM/ OpenStack/ Nutanix/RHVH 8.1.x (OVA)
	8.0.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
AWS	7.1.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
	8.0.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
System Platform	6.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console
Non-System Platform	6.x	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console	Migration using AES web console

Supported upgrade paths for WebLM

The following table displays all the upgrade paths from earlier releases to Release 8.1.x.

Important:

- If you are upgrading standalone WebLM by using Solution Deployment Manager on the following supported platform, the system preserves the licenses that are available on old WebLM.
  - Appliance Virtualization Platform to Appliance Virtualization Platform
  - Appliance Virtualization Platform to VMware
  - VMware to VMware
  - VMware to Appliance Virtualization Platform
- If you are upgrading standalone WebLM by using Solution Deployment Manager in Software-only environment, the system does not preserve the licenses that are available on old WebLM.
- If you are upgrading standalone WebLM by using CLI-based procedure without using WebLM, the system does not preserve the licenses that are available on old WebLM as the host id of new WebLM changes. It only restores the users that are available on old WebLM, if supported. You need to rehost licenses on new WebLM.

Note:

- Before starting the application upgrade, upgrade the platform and hypervisor.

- For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.
- Upgrade or migration using Solution Deployment Manager is only supported with same IP Address of the application in Software-only environment.

  Software-only upgrade is supported for VMware, KVM, Nutanix, RHVH, OpenStack, Hyper-V, AWS, GoogleCloud, and Azure.

For information about terms used in the following table, see “Glossary”.

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/ OpenStack/ Nutanix/RHVH 8.1.x (OVA)
AVP	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
VMware	6.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	7.1.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
	8.0.x	Migration using SDM	Fully automated upgrade using SDM	Fully automated upgrade using SDM	Migration using CLI	Migration using CLI
KVM	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI

Table continues…

From offer	From Release	To Software-only 8.1.x (ISO)	To AVP 8.1.x (OVA)	To VMware 8.1.x (OVA)	To AWS 8.1.x (OVA)	To KVM/ OpenStack/ Nutanix/RHVH 8.1.x (OVA)
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
Software-only	8.0.x	Migration using SDM	NA	NA	NA	NA
AWS	7.1.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI
	8.0.x	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI	Migration using CLI

Upgrade rollback

The administrator initiates the rollback in two cases:

- Upgrade process of an element fails: The administrator need not rollback upgrade of all the elements. When the element upgrade fails, the entire upgrade process stops and displays the failure status on the Upgrade Management page. The entire upgrade process does not roll back. Only the failed element upgrade rolls back.
- Upgrade process of the entire system fails: The administrator rolls back upgrade of all the elements when the system upgrade fails. The upgrade process stops and the overall upgrade process rolls back.

Chapter 6: Resources

Documentation

The following table lists the documents related to the components of Avaya Aura® Release 8.1.3. Download the documents from the Avaya Support website at https://support.avaya.com.

Title	Description	Audience
Implementation		
Deploying Avaya Aura® System Manager in Virtualized Environment	Deploy the Avaya Aura® System Manager application in a virtualized environment.	Implementation personnel
Deploying Avaya Aura® System Manager in Virtual Appliance	Deploy the Avaya Aura® System Manager application in a virtual appliance environment.	Implementation personnel
Deploying Avaya Aura® System Manager in Infrastructure as a Service Environment	Deploy the Avaya Aura® System Manager application on cloud services.	Implementation personnel
Deploying Avaya Aura® System Manager in Software-Only Environment	Deploy the Avaya Aura® System Manager application in a software only environment.	Implementation personnel
Upgrading Avaya Aura® System Manager	Upgrade the Avaya Aura® System Manager application to Release 8.1.x.	System administrators and IT personnel
Deploying Avaya Aura® Communication Manager in Virtualized Environment	Describes the implementation instructions while deploying Communication Manager on VMware and Kernel-based Virtual Machine (KVM).	Implementation personnel
Deploying Avaya Aura® Communication Manager in Virtual Appliance	Describes the implementation instructions while deploying Communication Manager on Appliance Virtualization Platform.	Implementation personnel
Deploying Avaya Aura® Communication Manager in Infrastructure as a Service Environment	Describes the implementation instructions while deploying Communication Manager on Amazon Web Services, Microsoft Azure, Google Cloud Network.	Implementation personnel

Table continues…

Title	Description	Audience
Deploying Avaya Aura® Communication Manager in Software-Only Environment	Describes the implementation instructions while deploying Communication Manager on a software-only environment.	Implementation personnel
Upgrading Avaya Aura® Communication Manager	Describes instructions while upgrading Communication Manager.	System administrators and IT personnel
Deploying Avaya Aura® Session Manager and Avaya Aura® Branch Session Manager in Virtualized Environment	Describes how to deploy the Session Manager virtual application in a virtualized environment.	Implementation personnel
Deploying Avaya Aura® Session Manager in Infrastructure as a Service Environment	Describes how to deploy the Session Manager in the Infrastructure as a Service (IaaS) environment.	Implementation personnel
Deploying Avaya Aura® Session Manager and Avaya Aura® Branch Session Manager in Software-Only Environment	Describes how to deploy the Session Manager in the Software-Only environment.	Implementation personnel
Deploying Avaya Aura® Session Manager and Avaya Aura® Branch Session Manager in Virtual Appliance	Describes how to deploy the Session Manager in Virtual Appliance.	Implementation personnel
Upgrading Avaya Aura® Session Manager	Provides common administration scenarios.	System administrators and IT personnel
Deploying Avaya Aura® Application Enablement Services in Virtual Appliance	Deploy Application Enablement Services applications in Virtual Appliance	Implementation personnel
Deploying Avaya Aura® Application Enablement Services in Virtualized Environment	Deploy Application Enablement Services applications in Virtualized Environment	Implementation personnel
Deploying Avaya Aura® Application Enablement Services in Infrastructure as a Service Environment	Deploy Application Enablement Services applications in Infrastructure as a Service Environment	Implementation personnel
Deploying Avaya Aura® Application Enablement Services in a Software-Only Environment	Deploy Application Enablement Services applications in Software-Only Environment	Implementation personnel
Upgrading Avaya Aura® Application Enablement Services	Upgrading Application Enablement Services applications.	System administrators and IT personnel
Deploying standalone Avaya WebLM in Virtual Appliance	Deploy the application in virtual appliance environment by using Solution Deployment Manager	Implementation personnel
Deploying standalone Avaya WebLM in Virtualized Environment	Deploy the application in virtualized environment.	Implementation personnel

Table continues…

Title	Description	Audience
Deploying standalone Avaya WebLM in Infrastructure as a Service Environment	Deploy the application on cloud services.	Implementation personnel
Deploying standalone Avaya WebLM in Software-Only Environment	Deploy the application in software-only environment.	Implementation personnel
Upgrading standalone Avaya WebLM	Upgrade the application.	System administrators and IT personnel
Administration		
Administering Network Connectivity on Avaya Aura® Communication Manager	Describes the network components of Communication Manager, such as gateways, trunks, FAX, modem, TTY, and Clear-Channel calls.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Administering Avaya Aura® Communication Manager	Describes the procedures and screens used for administering Communication Manager.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Administering Avaya Aura® System Manager	Describes the procedures for configuring System Manager Release 8.1.3 and the Avaya Aura® applications and systems managed by System Manager.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Avaya Aura® Presence Services Snap-in Reference	Describes the steps to deploy and configure Presence Services.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Using		
Using the Solution Deployment Manager client	Deploy and install patches on Avaya Aura® applications.	System administrators
Understanding		
Avaya Aura® Communication Manager Feature Description and Implementation	Describes the features that you can administer using Communication Manager.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Avaya Aura® Communication Manager Screen Reference	Describes the screen and detailed field descriptions of Communication Manager.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel

Table continues…

Title	Description	Audience
Administering Avaya Aura® Session Manager	Describes how to administer Session Manager by using System Manager.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Avaya Aura® Communication Manager Hardware Description and Reference	Describes the hardware devices that can be incorporated in a Communication Manager telephony configuration.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Planning for Deploying Avaya Aura® applications	Provides planning information for deploying Avaya Aura® applications on supported platforms.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Planning for Upgrading Avaya Aura® applications to Release 8.1.x	Provides planning information for upgrading Avaya Aura® applications on supported platforms.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel
Maintenance and Troubleshooting		
Maintenance Commands for Avaya Aura® Communication Manager, Branch Gateway and Servers	Provides commands to monitor, test, and maintain hardware components of Avaya servers and gateways.	Solution Architects, Implementation Engineers, Sales Engineers, Support Personnel

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 both 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

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

Important:

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

Using the Avaya Documentation Center, you can:

- Search for keywords.

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

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

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

  - Create, rename, and delete a collection.

- Add topics from various documents to a collection.
- Save a PDF of the selected content in a collection and download it to your computer.
- Share content in a collection with others through email.
- Receive collection that others have shared with you.

• Add yourself as a watcher using the **Watch** icon ( ).

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

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

As a watcher, you are notified when content is updated or deleted from a document, or the document is removed from the website.

• Share a section on social media platforms, such as Facebook, LinkedIn, and Twitter.

• Send feedback on a section and rate the content.

Note:

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

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.

Course code	Course title
20460W	Virtualization and Installation Basics for Avaya Team Engagement Solutions
20970W	Introducing Avaya Device Adapter
20980W	What's New with Avaya Aura® Release 8.1
71200V	Integrating Avaya Aura® Core Components
72200V	Supporting Avaya Aura® Core Components
20130V	Administering Avaya Aura® System Manager Release 8.1
21450V	Administering Avaya Aura® Communication Manager Release 8.1

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.

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.

1. Go to http://www.avaya.com/support.
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.

Glossary

Fully automated upgrade using Solution Deployment Manager

The fully automated upgrade process includes upgrading a product from earlier release to the latest release by using either Solution Deployment Manager Client or System Manager Solution Deployment Manager. In fully automated upgrade all subsequent steps are executed as a single process, including tasks such as backup, deploy, and post upgrade tasks such as applying patches or service packs.

For fully automated upgrade using Solution Deployment Manager, the system does not allow to change the IP Address of the application. Alternatively, you can use the Migration using CLI method.

For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.

Migration

The migration process includes changing the hypervisor or hardware while upgrading the application.

- **Migration using CLI:** During migration, you need use the data migration utility.
- **Migration using SDM:** Migration using Solution Deployment Manager is supported using same IP Address.

  For example, from:

  - System Platform to AVP/VMware
  - AVP to VMware
  - VMware to AVP

  For upgrading System Manager, use Solution Deployment Manager Client. For upgrading applications other than System Manager, use System Manager Solution Deployment Manager.

  If you want to migrate using different IP Address for the application, use the CLI method.

Update

The update process includes installing patches of an application. For example, kernel patches, security patches, hotfixes, service packs, and feature packs.

Upgrade using CLI The upgrade process includes upgrading a product from earlier release to the latest release without the need to change the server hardware or hypervisor.

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