



# **Avaya Aura<sup>®</sup> Media Server Overview and Specification**

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# Chapter 1: Introduction

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## Purpose

This document provides an overview and a model to estimate Avaya Aura® MS 10.2 server capacity on various platforms. It also provides an explanation of the engineering model used to estimate resource requirements. This document is an Avaya Aura® MS engineering guide that must be used in conjunction with adopting product documentation. The adopting product offer definition must always be consulted for capacity and engineering planning.

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## Changes to platform support

As of January 1, 2026, Avaya has refined its infrastructure support strategy for Avaya Aura® and Surround Applications. This update specifically impacts Software-Only and Infrastructure as a Service (IaaS) deployment models. To ensure your environment remains compliant and supported, review the following changes to supported platforms:

**Discontinued Platforms:**

- Hypervisor: Microsoft Hyper-V
- Cloud Platforms: Microsoft Azure, Google Cloud Platform (GCP), IBM Cloud

**Supported platforms for Software Only and Infrastructure as a Service (IaaS) deployment models:**

- Cloud Platform: AWS
- On-premises platforms: KVM, Nutanix, VMware

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## Change history

Issue	Date	Summary of changes
6	March 2026	Added the section: <a href="#">Changes to platform support</a> on page 5

*Table continues...*

Issue	Date	Summary of changes
5	February 2026	Updated the followin sections: <ul style="list-style-type: none"><li>• <a href="#">Avaya Provided Physical Appliance MPU Ratings and Attributes</a> on page 20</li></ul>
4	March 2025	Added Secure boot support.
3	March 2025	Added Dell R660 support.
2	February 2025	Updated to include details for Nutanix
1	December 2024	Release 10.2 Initial document.

# Chapter 2: Overview

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## About Avaya Aura® MS

Avaya Aura® MS delivers advanced multimedia processing features to a broad range of products and applications. The media server uses the latest open standards for media control and media processing. Avaya Aura® MS is a highly scalable, software-based solution that deploys on standard server hardware running Linux.

Avaya Aura® MS is always deployed with another Avaya product or application referred to as the adopting product. Adopting products use Avaya Aura® MS media processing features by employing Media Server Markup Language (MSML) to control and invoke various services on the media server. MSML is transported over either SIP or REST, depending on the adopting product. See adopting product documentation for proper Avaya Aura® MS configuration. Adopting product examples include:

- Avaya Experience Platform® On-Prem (AXP On-Prem, formerly Avaya Aura® Call Center Elite)
- Avaya Aura® Communication Manager
- Avaya Aura® Web Gateway
- Avaya Breeze® platform
- Avaya Equinox® Conferencing
- Avaya Oceana®
- Avaya Spaces
- Avaya Session Border Controller

Avaya Aura® MS offers the following deployment options:

- Virtual Appliance (ESXi based):
  - Deploy using VMWare® ESXi: The Avaya Aura® MS application and an optimized Linux® OS are packaged as an OVA that may be deployed to VMWare® ESXi. For more details, see *Deploying and Updating Avaya Aura® Media Server Appliance*.
- Virtual Appliance (ASP 130 KVM based)
  - Deploy using ASP 130 with KVM on Red Hat® hypervisor: The Avaya Aura® MS application and an optimized Linux® OS are packaged as a QCOW2 image along with an interactive installer script that may be deployed to a ASP 130 with KVM on Red Hat® hypervisor. For more details refer to *Deploying and Updating Avaya Aura® Media Server Appliance*.

- **Physical Appliance:** The Avaya Aura® MS application and an optimized Linux® OS are preinstalled on Avaya Standard Platform (ASP) 100 series hardware server platform. For more details refer to *Deploying and Updating Avaya Aura® Media Server Appliance*.
- **Software Application:** The customer supplies a platform with a configured Linux OS and uses the Avaya Aura® MS software installer to install and configure the media server application. For more details refer to *Installing and Updating Avaya Aura® Media Server Application*.
- **Embedded:** The Avaya Aura® MS application is installed within another Avaya product, for example Equinox® Media Server. For more details refer to the Avaya product documentation.

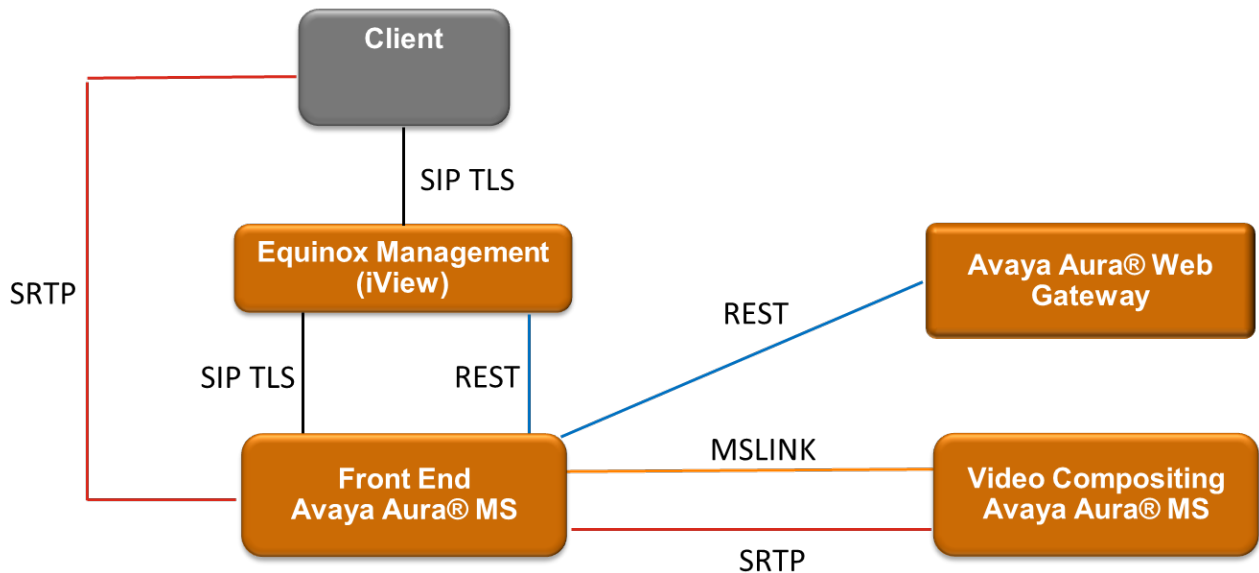
In addition, the Avaya Aura® MS software installer can be used to install the media server application on the following virtual and cloud platforms:

- Amazon Web Services (AWS)
- Google Cloud Platform
- IBM Cloud
- Kernel-based Virtual Machine (KVM)
- Microsoft Azure
- Microsoft Hyper-V
- Nutanix Acropolis Hypervisor (AHV)

Avaya Aura® Media Server provides different services depending on the server profile that is configured. The following server profiles are supported:

- **Default:** This is the default profile used in all deployments and is also referred to as the Front-End MS.
- **Video Compositor:** This profile is referred to as Video Compositing MS and is required for deployments requiring video processing. When this profile is configured the media server is dedicated to performing video compositing services.

The following example shows both profile types deployed within Avaya Equinox Conferencing Team Engagement solution.



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## New in this release

This section contains features new to Avaya Aura® Media Server 10.2.

### Related links

[New in Avaya Aura Media Server 10.2](#) on page 9

## New in Avaya Aura® Media Server 10.2

- Deployment in the KVM on Red Hat® virtualized environment for ASP 130 (appliance only).
- TLSv1.3 support is added (except for ICE).
- Support for TLSv1.0 is removed. TLSv1.2 is disabled by default (except for ICE).
- Update of dual unicast monitoring.
- Removal of Element Manager tasks that are no longer needed.
- Deployment in a Nutanix environment running the Acropolis Hypervisor (AHV).
- Support for the new Dell R660xs ASP 110 server for physical appliances.
- Secure boot support.

### Related links

[New in this release](#) on page 9

# Chapter 3: Interoperability

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## Product compatibility

Refer to the adopting product compatibility matrix to determine compatible Avaya Aura® MS releases. For the latest and most accurate compatibility information, go to

<http://support.avaya.com/CompatibilityMatrix/Index.aspx>

# Chapter 4: Licensing requirements

Avaya Aura® MS requires a Media Server Instances license (VALUE\_MSR\_SERVER\_INSTANCES) to enable its functionality. In addition, there is licensing required by the adopting product to enable media sessions for that product. For further details refer to the adopting product offer definition.

# Chapter 5: Performance specifications

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## Media Processing Unit

A media processing unit (MPU) is a normalized measure of the cost of using a predefined set of granular resources within a media server session.

The concept of an MPU is used to:

- Describe the potential capacity of a media server instance. This is known as an MPU rating.
- Describe the potential aggregate capacity of a cluster or network of media servers.
- Estimate the cost of a media server session utilizing specific resources (required by one or more applications).
- Provide a model for capacity planning across multiple products and applications sharing the same media server instances.

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## Audio Base Resource Set

The audio base resource set has been created to describe the subset of pre-allocated resources assigned to a universal Avaya Aura<sup>®</sup> MS media session.

The audio base resource set includes the following:

Resource Type	In base resource set?
Audio Encoding and Decoding	Included
Packet Loss Concealment	Included
Dynamic Jitter Buffer with Compaction	Included
Full Duplex RTP Packetization at 20ms Ptime	Included
Secure RTP/RTCP with 128-bit or 256-bit AES Encryption	Included
QoS Measurements and Archival	Included
Digit Collection	Included
Announcements	Included
Tone Generation	Included

*Table continues...*

Resource Type	In base resource set?
Conferencing and Mixing	Included
Content Storage Access	Included
MSML Interpreter Instance	Included
SIP or REST Mutual TLS Session	Included

Avaya Aura® MS supports other optional resources such as MRCP TTS and ASR, video processing, speech search engine, WebRTC interworking, and many others. These resources are outside the base resource set. Optional resources are assigned separate MPU values, which can be summed together with the base resource set to calculate the total MPU cost for a media session.

## Audio MPU Values

The following tables contains the MPU values assigned per audio codec for one session. These values include all resources outlined in the audio base resource set. Note that the Spectre/ Meltdown mitigations have impacted codec performance in some cases, and thus the ratio with G.711 has changed for certain codecs.

### Narrowband Codecs

Base Resource Set with Codec	Base Resource Set with Codec	Bit Rate (Kbps)	MPU per Session
G.711 ulaw	8000	64	1.0
G.711 alaw	8000	64	1.0
G.726 @32	8000	32	1.8
G.729A	8000	8	2.0
G.729AB	8000	8	2.0
OPUS Constrained Narrowband	8000	12	4.3
OPUS Narrowband	8000	16	4.3

### Wideband Codecs

Base Resource Set with Codec	Sample Rate	Bit Rate (Kbps)	MPU per Session
G.722	16000	64	1.4
G.722.1 @24 (Siren)	16000	24	1.5
G.722.1 @32 (Siren)	16000	32	1.5
OPUS Wideband	16000	20	6.8

If resources outside the audio base resource set are allocated, they will consume additional MPUs which need to be accounted for. Note that the base resource set includes the cost of SRTP/

SRTCP encryption and decryption by default. The cost is already accounted for in the codec MPU values above.

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## Estimating MPUs Required Using Total Sessions

Most customers will determine they need a specific number of simultaneous session/channels and will need to calculate the total MPUs required to estimate the number of servers to deploy. This can be achieved by multiplying the codec mix percentages and adding up the MPU values.

For example, a customer may want 800 channels, 75% G.711, 25% G.729AB.

75% G.711 =  $800 * 0.75 = 600 * 1 \text{ MPU} = 600 \text{ MPU}$

25% G.729AB =  $800 * 0.25 = 200 * 2 \text{ MPU} = 400 \text{ MPU}$

Total = 1000 MPU

Now estimating MPUs per server will allow estimation of servers required.

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## Avaya Aura<sup>®</sup> MS MPU Rating Estimate

Avaya Aura<sup>®</sup> MS will estimate the MPU rating of the virtual or bare metal hardware it is installed on. The MPU estimate can be found on the Element Manager's Server Profile >> General Settings page. Avaya Aura<sup>®</sup> MS also provides the same rating via its information report retrievable via SIP or REST at runtime. Note that the estimate Avaya Aura<sup>®</sup> MS provides may be less accurate than the PassMark<sup>®</sup> CPU Mark method.

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## Estimating Per Server MPU Capacity Using PassMark<sup>®</sup> CPU Mark Method

In many cases (especially with older processors) a better estimate of bare metal server capacity can be calculated by using the PassMark<sup>®</sup> CPU Mark benchmark score from the PassMark<sup>®</sup> website

[https://www.cpubenchmark.net/cpu\\_list.php](https://www.cpubenchmark.net/cpu_list.php)

The conversion factor from CPU Marks to MPU is: **1 MPU = 5.8 CPU Marks**

Note, before Spectre/Meltdown the factor was 5.3 CPU marks.

The PassMark<sup>®</sup> score will be lower when Spectre/Meltdown is enabled. An additional penalty was added to account for the Avaya Aura<sup>®</sup> MS use cases.

The CPU Mark score can be converted to an MPU rating using the following formula:

Let C = CPU Mark Score  
 Let F = Conversion Factor = 5.8  
 Let M = MPU Estimate  
 $M = (C / F)$

For example, a customer has a server with a single Xeon X5670 processor @ 2.93 GHZ. This processor has an average CPU Mark score of 8143 according to the PassMark® website.

**Intel Xeon X5670 @ 2.93GHz** + Compare

Description: Socket: LGA1366, Clockspeed: 2.9 GHz, Turbo Speed: 3.3 GHz, No of Cores: 6 (2 logical cores per physical), Max TDP: 95 W

Other names: Intel(R) Xeon(R) CPU X5670 @ 2.93GHz

CPU First Seen on Charts: Q1 2010

CPUmark/\$Price: 57.22 Overall Rank: 161

Last Price Change: \$142.3 USD (2010-07-04)

**Average CPU Mark**

**8143**

Single Thread Rating: 1343  
Samples: 49

C = 13000  
 F = 5.8  
 $M = (13000 / 5.8) = 2241$  MPU

The MPU estimate for this server would be 2241 MPU.

This is a method to help estimate capacity and does have a margin of error. It should be used with some discretion.

## Virtual Machine MPU Estimation

A custom virtual machine may be an appliance using a non-standard profile, or a software install on a customer supplied OS within a virtual machine. For appliance deployments on VMware, you must use one of the pre-defined VMware profiles and the associated MPU estimates. As we introduce new decomposed video processing features on Avaya Aura® MS, we will relax this requirement for select deployment types. When deploying a custom VM the number of vCPU's must always be even and should adhere to the following guidelines:

Installation Type	vCPU's (even only)	RAM (min)	Disk (min)	IOPS	NIC
Software Only (PVI)	4	4.5 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	6	8 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	8	8 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	10	16 GB	50 GB	100	>= 1Gbps

*Table continues...*

Installation Type	vCPU's (even only)	RAM (min)	Disk (min)	IOPS	NIC
Software Only (PVI)	12	16 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	14	16 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	16	16 GB	50 GB	100	>= 1Gbps
Software Only (PVI)	>= 18	32 GB	50 GB	100	>= 1Gbps

The following method can be used to estimate the MPU rating of a custom virtual machine on a properly configured host.

First, determine the type of hypervisor utilized:

- If it is VMware, utilize one of the existing pre-defined VMware profiles and associated MPU estimates. If you require a VM size that is not pre-defined and your deployment type has been cleared with the Avaya Aura® MS team, follow this guide, but use physical cores in variable L in place of logical processors.
- If its KVM (also used by Google Compute Engine), XEN (also used by Amazon EC2), Nutanix AHV or Hyper-V, these hypervisors expose hyperthreaded cores through to their guests. For this reason, you cannot use the VMware profiles and MPU ratings.

Second, determine the type of processor utilized by the host.

- Take note of the CPU type, and the number of CPUs installed (sockets) if possible.
- If you don't know how many CPUs are installed on the host, assume a dual configuration (two).
- Lookup the number physical cores and logical cores using the CPU type.

Next, decide how many vCPUs you wish to allocate to Avaya Aura® MS.

Finally, lookup the CPU Mark of the installed CPU as described in the previous section.

- If the number of vCPUs is less than or equal to the number of logical processors on a single CPU (socket) use the single CPU PassMark® score instead of the dual.

Now you can calculate the MPU estimate for the VM.

The formula is:

Let C = CPU Mark Score

Let F = Conversion Factor = 5.8

Let L = Number of logical processors

Let V = Number of vCPUs to allocate

Let P = Penalty for virtualization = 0.8

Let M = MPU Estimate

$M = (C / F / L * V * P)$

## Example 1

First example if you wish to run Avaya Aura® MS on a KVM hypervisor. You want to assign 6 vCPUs.

The hypervisor is using dual Intel E5-2630v3 processors at 2.4GHZ. Each processor is 8 physical cores, 2 logical per physical. It has 16 logical processors per CPU, 32 in total.

Since we want to assign 6 vCPUs, this will easily fit within one CPU, so we will use the single CPU PassMark® score.

Intel Xeon E5-2630 v3 @ 2.40GHz	+ Compare	Average CPU Mark
<b>Socket:</b> LGA2011-v3 <b>Clockspeed:</b> 2.4 GHz <b>Turbo Speed:</b> 3.2 GHz <b>No of Cores:</b> 8 (2 logical cores per physical) <b>Typical TDP:</b> 85 W		<h1 style="color: red;">12815</h1>
<b>Other names:</b> Intel(R) Xeon(R) CPU E5-2630 v3 @ 2.40GHz <b>CPU First Seen on Charts:</b> Q4 2014 <b>CPUmark/\$Price:</b> 18.06 <b>Overall Rank:</b> 145 <b>Last Price Change:</b> \$709.66 USD (2014-10-10)		Single Thread Rating: 1746 Samples: 131* *Margin for error: Low

The CPU mark score for this CPU is 12,815.

Now assign the variables:

Let C = CPU Mark Score = 12,815

Let F = Conversion Factor = 5.8

Let L = Number of logical processors = 16

Let V = Number of vCPUs to allocate = 6

Let P = Penalty for virtualization = 0.8

$(C / F / L / * V * P) = M$

$12815 / 5.8 / 16 * 6 * 0.8 = 663 \text{ MPU}$

In this example, the 6 vCPU VM would have a conservative MPU rating of 663. Keep in mind with this hypervisor (KVM), hyperthreading is exposed to the guest, so 6 vCPUs will map to 3 physical cores/6 logical.

## Example 2

Second example you wish to run an Avaya Aura® MS compositor on VMware consuming 20 vCPUs. The hypervisor is running a dual Intel E5-2680v3 processor at 2.5GHZ. Each processor has 12 cores/24 threads for a total of 48 logical processors.

<b>[Dual CPU] Intel Xeon E5-2680 v3 @ 2.50GHz</b>	<b>Average CPU Mark</b>
<i>Socket: LGA2011-v3</i> <i>Clockspeed: 2.5 GHz</i> <i>Turbo Speed: 3.3 GHz</i> <i>No of Cores: 12 (2 logical cores per physical)</i> <i>Typical TDP: 120 W</i>	<b>24877</b>
<i>Other names: Intel(R) Xeon(R) CPU E5-2680 v3 @ 2.50GHz</i> <i>CPU First Seen on Charts: Q4 2014</i> <i>CPUmark/\$Price: 8.55 Overall Rank: 38</i> <i>Last Price Change: \$2910 USD Total for 2 CPUs (2014-10-12)</i>	Single Thread Rating: 1765 Samples: 34* *Margin for error: Low

The CPU mark score for this CPU is 24,877.

Now assign the variables:

Let C = CPU Mark Score = 24,877

Let F = Conversion Factor = 5.8

Let L = Number of logical processors = 24 <-- 24 is used here instead of 48 because this is VMware.

Let V = Number of vCPUs to allocate = 20

Let P = Penalty for virtualization = 0.8

$$(C / F / L / * V * P) = M$$

$$24877 / 5.8 / 24 * 20 * 0.8 = 2859 \text{ MPU}$$

In this example, the 20 vCPU VM would have a conservative MPU rating of 2,859.

---

## Per Server Session Limit

The per server media session limit is 4000 sessions, regardless of the server MPU rating. Control channels are not factored (and do not count) in this number. However, it is important to note that servers with MPU ratings higher than 4000 can be used to increase the channel count of the more complex codecs like G.729 or OPUS.

The formula is  $\text{MIN}(\text{Server MPU Rating} / \text{Session MPU}, 4000)$ .

If a server was calculated to have 5000 MPU:

G.711 capacity would still be  $\text{MIN}(5000/1, 4000) = 4000$ .

OPUS Wideband capacity would be  $\text{MIN}(5000/4.5, 4000) = 1111$ .

G.729AB capacity would be  $\text{MIN}(5000/2, 4000) = 2500$ .

---

## BHCC Performance Limits

Avaya Aura® MS is capable of sustained processing of up to 225 session requests per second on the high-capacity CS3 server (approximately 800,000 BHCC). The benchmark sets up a MSML audio session via SIP, plays an announcement for two seconds, and then releases the session (a total of 8 SIP transactions). Lower performance servers will have lower BHCC ratings. All the specified Avaya Aura® MS servers including the virtual appliance should support at least 80,000 BHCC.

It is important to understand that very short hold times may result in the inability to utilize all available session capacity on the server. For example, an Avaya Aura® MS with a capacity of 4000 concurrent sessions running the benchmark above, would require processing of 2000 session requests per second to utilize all available capacity. That would be 7.2 million BHCC, an unrealistic number for a server performing media processing and many other complex functions, and also unrealistic for most application servers. By comparison Aura Session Manager 6.3 is capable of 540,000 BHCC at 150 session requests per second. However, in any case a higher BHCC capacity is unnecessary. The high concurrent session capacity of Avaya Aura® MS is important for call types that have longer hold times. Contact center and conferencing scenarios will quickly consume capacity at lower session request rates because the hold time is longer. A 2 minute hold time in a contact center environment only requires processing of 33 session requests per second (approximately 119,000 BHCC) to fully utilize a 4000 session Avaya Aura® MS.

---

## Capacity Profile Constraints

Avaya Aura® MS detects the number of logical processors and available system memory on each restart and adjusts its internal buffer pools and scalability limits accordingly. This is achieved by selecting a capacity profile (also known as a scalability profile) that best suits the underlying physical or virtual hardware. This scalability profile feature helps conserve memory and processing overhead on servers with less than optimal memory or processor configurations. It essentially avoids wasting processor cycles and memory by allocating critical thread counts to match the number of logical processors and sizing the server's data structures and buffer pools to match the available memory.

The currently selected capacity profile is visible on the Avaya Aura® MS Element Manager on the server profile page, along with the maximum sessions that the server can support in this configuration. An MPU rating estimate is also provided. Note that labels are assigned to each distinct capacity profile. Currently there are five profiles: tiny, small, medium, large, extra-large. These profiles are applicable to both bare metal and virtualized servers. The profile ranges and constraints have changed in Avaya Aura® MS 7.8 compared to 7.7.

The capacity profile range starts at 300 concurrent sessions at the lowest end and tops out at 5000 (the media session limit is still 4000 sessions; the 5000 number includes control channels). It is important to note that the capacity profile selected is not an estimate of maximum capacity (it is designed to error on the side of large), although it does represent a hard limit on the maximum number of concurrent sessions. The capacity profile is designed to be estimated higher than the maximum media processing capacity to leave room for control channels, and to leave room for very high-performance machines.

For example, the Media Server Profile 1 (4 vCPU small OVA) uses the small capacity profile. The theoretical maximum number of sessions including control channels is 1000. The MPU rating remains at 550 for this OVA configuration in all cases. This number does not imply the server has 1000 MPU. A quad core bare metal server with 4GB of ram will also select a small capacity profile

Note that although the minimum amount of RAM present to install Avaya Aura® MS is 2GB, this is not enough to reach top end capacity. At least 8GB of memory must be installed to support maximum capacity. Higher if other resources are utilized beyond audio processing.

Profile	Minimum CPU MHZ	Minimum Cores (physical)	Minimum RAM	Maximum Sessions
Tiny	1500 MHZ	*1	*1024 MB	300
Small	2000 MHZ	4	4096 MB	1000
Medium	3000 MHZ	4	8192 MB	2000
Medium	2200 MHZ	8	8192 MB	2000
Large	2200 MHZ	12	8192 MB	3500
Very Large	2900 MHZ	12	12228 MB	5000
Very Large	2200 MHZ	16	12228 MB	5000
Very Large	2000 MHZ	24	12228 MB	5000

\*Avaya Aura® MS will not install without at least two logical processors present and 2GB of ram installed. Avaya Aura® MS does provide some variance/forgiveness in available RAM if it's close to the minimum.

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## Avaya Provided Physical Appliance MPU Ratings and Attributes

Physical appliances provided by Avaya for Avaya Aura® MS have assigned MPU ratings based on internal tests and benchmarks. The per server MPU ratings are as follows:

ASD Name	Server Type	CPU	Physical Processors	Physical Cores Total	Logical Processors Total	RAM	Disk	NIC	MPU Rating	Engineered Media Session Limit
Large Bare Metal Server V2	Dell R640 or Dell R660xs	Intel G-6132 2.60GHZ	2	28	56	96 GB	6x300GB 10K Hardware Raid 5	1Gbps Hex Port	9000	4000

## KVM Virtualized Appliance (ASP only) MPU Rating and Attributes

In practice the MPU rating of a virtual Avaya Aura<sup>®</sup> MS will vary widely depending on the performance of the underlying hardware. Providing a single MPU rating for a virtual appliance is not possible unless the hypervisor hardware is fixed, or the capacity is aligned with the least performing hardware. Therefore, our estimates are conservative in some cases, depending on the actual hardware Avaya Aura<sup>®</sup> MS is deployed on.

Due to the fact Avaya Aura<sup>®</sup> MS is a low latency real-time application, guidelines must be followed when deploying an Avaya Aura<sup>®</sup> MS virtual appliance on a shared hypervisor. Oversubscribing the hypervisor can result in unpredictable performance due to varying VM scheduling latency. An ordinary application may not be impacted by this latency, but a real-time application needing to send and receive media at very frequent and precise intervals ( $\leq 10\text{ms}$ ) is at greater risk. For these reasons, the total vCPUs utilized by all virtual machines on a shared hypervisor should not exceed the number of logical cores available. This prevents virtual machines from interfering with each other, and prevents difficulties with scheduling each VM consistently and predictably.

For example, a hypervisor with two E5-2640v3 CPUs will have 16 physical cores total, or 32 logical processors with hyperthreading. If an AAMS VM is deployed on this hypervisor, a total of 32 vCPUs are available for assignment across all co-resident VMs including AAMS. Assigning more than 32 vCPUs will oversubscribe the server. Also note that although it seems capacity is being left on the table, HT provides only a modest improvement in performance (10-15%). The improvement is potentially zero or negative in virtualized environments with latency sensitive, CPU intensive applications. For more information, please consult the AAMS documentation.

Profile Name	ASP Version	Virtual CPU's	Minimum Core Processor Speed	RAM	Disk	IOPS	Bandwidth Usage For Budgeting Includes signaling and media (audio), plus overhead and spare capacity	NIC	MPU Rating
Profile 1: 4 vCPUs, 4.5 GB Memory, 50 GB vDisk	6.0 or higher	4 vCPU	2200 MHz	4.5 GB	50 GB	100	120 Mbits	1x 1Gbps Virtual	550

*Table continues...*

Performance specifications

<b>Profile Name</b>	<b>ASP Version</b>	<b>Virtual CPU's</b>	<b>Minimum Core Processor Speed</b>	<b>RAM</b>	<b>Disk</b>	<b>IOPS</b>	<b>Bandwidth Usage For Budgeting</b>  <b>Includes signaling and media (audio), plus overhead and spare capacity</b>	<b>NIC</b>	<b>MPU Rating</b>
Profile 2: 4 vCPUs, 4.5 GB Memory, 250 GB vDisk	6.0 or higher	4 vCPU	2200 MHz	4.5 GB	250 GB	100	120 Mbits	1x 1Gbps Virtual	550
Profile 3: 8 vCPUs, 8.0 GB Memory, 50 GB vDisk	6.0 or higher	8 vCPU	2200 MHz	8.0 GB	50 GB	100	250 Mbits	1x 1Gbps Virtual	1100
Profile 4: 8 vCPUs, 8.0 GB Memory, 250 GB vDisk	6.0 or higher	8 vCPU	2200 MHz	8.0 GB	250 GB	100	250 Mbits	1x 1Gbps Virtual	1100
Profile 5: 16 vCPUs, 16.0 GB Memory, 50 GB vDisk	6.0 or higher	16 vCPU	2200 MHz	16.0 GB	50 GB	100	1000 Mbits	1x 1Gbps Virtual	2200
Profile 6: 16 vCPUs, 16.0 GB Memory, 250 GB vDisk	6.0 or higher	16 vCPU	2200 MHz	16.0 GB	250 GB	100	1000 Mbits	1x 1Gbps Virtual	2200

## VMWare Virtualized Appliance MPU Rating and Attributes

In practice, the MPU rating of a virtual Avaya Aura<sup>®</sup> MS will vary widely depending on the performance of the underlying hardware. Providing a single MPU rating for a virtual appliance is impossible unless the hypervisor hardware is fixed, or the capacity is aligned with the least performing hardware. Therefore, our estimates are conservative in some cases, depending on the actual hardware Avaya Aura<sup>®</sup> MS is deployed on.

Since Avaya Aura<sup>®</sup> MS is a low latency real-time application, guidelines must be followed when deploying an Avaya Aura<sup>®</sup> MS virtual appliance on a shared hypervisor. Oversubscribing the hypervisor can result in unpredictable performance due to varying VM scheduling latency. An ordinary application may not be impacted by this latency, but a real-time application needing to send and receive media at very frequent and precise intervals ( $\leq 10\text{ms}$ ) is at greater risk. For these reasons, the total vCPUs utilized by all virtual machines on a shared hypervisor must not exceed the number of physical cores available. This prevents virtual machines from interfering with each other and prevents difficulties with scheduling each VM consistently and predictably.

For example, a hypervisor with two E5-2640v3 CPUs will have 16 physical cores, or 32 logical processors with hyperthreading. If an Avaya Aura<sup>®</sup> MS VM is deployed on this hypervisor, a total of 16 vCPUs (not 32 vCPUs) are available for assignment across all co-resident VMs including Avaya Aura<sup>®</sup> MS. Assigning more than 16 vCPUs will oversubscribe the server. Also note that, although it seems capacity is available, HT provides only a modest improvement in performance (10-15%). The improvement is potentially zero or negative in virtualized environments with latency sensitive, CPU intensive applications. For more information, consult the Avaya Aura<sup>®</sup> MS documentation.

Specifications	Demo Profile	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6
ESXi Version	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)	7.0 or 8.0 (10.1 SP5 or higher)
Virtual CPUs	2	4	4	8	8	16	16
Minimum Core Processor Speed	2000 MHz	2200 MHz	2200 MHz	2200 MHz	2200 MHz	2200 MHz	2200 MHz
RAM	2.0 GB	4.5 GB	4.5 GB	8.0 GB	8.0 GB	16.0 GB	16.0 GB
Hard Disk	50 GB (thin provisioned)	50 GB	250 GB	50 GB	250 GB	50 GB	250 GB
IOPS	100	100	100	100	100	100	100

*Table continues...*

Specificati ons	Demo Profile	Profile 1	Profile 2	Profile 3	Profile 4	Profile 5	Profile 6
Bandwidth Usage For Budgeting  Includes signaling and media (audio), plus overhead and spare capacity	None	120 Mbits	120 Mbits	250 Mbits	250 Mbits	1000 Mbits	1000 Mbits
NIC	1x 1 Gbps Virtual	1x 1 Gbps Virtual	1x 1 Gbps Virtual	1x 1 Gbps Virtual	1x 1 Gbps Virtual	1x 1 Gbps Virtual	1x 1 Gbps Virtual
MPU Rating	N/A	550	550	1100	1100	2200	2200

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## MPU Penalties for Other Resources

Resource	MPU Penalty Per Session (Estimated)
WebRTC Interworking Audio	1.2
WebRTC Interworking Video	1.0
VoiceXML Interpreter Instance	1.0
MRCP ASR	0.1
MRCP TTS	0.1
1+1 High Availability	0.2
Aurix SSE Instance	5.5

# Chapter 6: Resources

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## Documentation

### Accessing the port matrix document

#### Procedure

1. Go to <https://support.avaya.com>.
2. To log in, click **Sign In** at the top of the screen and then enter your login credentials when prompted.
3. Click **Product Support > Documents**.
4. In **Select Release**, select the appropriate release number.  
This field is not available if there is only one release for the product.
5. From the **Select Content Type** list, select one or both of the following options:
  - **Application & Technical Notes**
  - **Design, Development & System Mgt**

### Finding documents on the Avaya Support website

#### Procedure

1. Go to <https://support.avaya.com>.
2. To log in, click **Sign In** at the top of the screen and then enter your login credentials when prompted.
3. Click **Product Support > Documents**.
4. In **Search Product**, start typing the product name and then select the appropriate product from the list displayed.
5. In **Select Release**, select the appropriate release number.  
This field is not available if there is only one release for the product.
6. **(Optional)** In **Enter Keyword**, type keywords for your search.
7. From the **Select Content Type** list, select one or more content types.  
For example, if you only want to see user guides, click **User Guides** in the **Select Content Type** list.

8. Click  to display the search results.




## Avaya Documentation Center navigation

For many programs, the latest customer documentation is available on the Avaya Documentation Center website at <https://documentation.avaya.com>. Some functionality is only available when you log in to the Avaya Documentation Center. The available functionality depends on your role.

### Important:

If the documentation you are looking for is not available on the Avaya Documentation Center, you can find it on the [Avaya Support website](#).

While navigating through the Documentation Center, you can click the **Avaya Documentation Center** logo at the top of the screen to return to the home page anytime. On the Avaya Documentation Center, you can do the following:

- Click **Avaya Links** in the top menu bar to access other Avaya websites, including the Avaya Support website.
- Click **Languages** () in the top menu bar to change the display language and view localized documents.
- In the **Search Documentation** field, search for keywords and click **Filter** to filter by solution category, product, or user role.  
You can select multiple items in each filter category. For example, you can select a product and multiple user roles.
- Click **Library** in the top menu bar to access the complete library of documents. Use the filtering options to refine your results.
- After performing a search or accessing the library, you can sort content on the search results page. When you find the item you want to view, click it to open it.
- Use the table of contents in a document for navigation. You can also click < or > next to the document title to navigate to the previous topic or the next topic.
- Click **Share** () to share a topic by email or copy the URL.
- Download a PDF of the current topic in a document, the topic and its subtopics, or the entire document.
- Print the section you are viewing.
- Add content to a collection by clicking **Add to My Topics** (). You can add the topic and its subtopics or add the entire publication.
- View the topics in your collections. To access your collections, click your name in the top menu bar and then click **My Topics**.

You can do the following:

- Create, rename, and delete a collection.

- Set a collection as the default or favorite 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 collections that others have shared with you.
  - Click **Watch** (👁) to add a topic to your watchlist so you are notified when the content is updated or removed.
  - View and manage your watchlist by clicking **Watchlist** from the top menu with your name.
- You can do the following:
- Enable **Email notifications** to receive email alerts.
  - Unwatch the selected content or all topics.
- Send feedback for a topic.

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## Viewing Avaya Mentor videos

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

### About this task

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

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

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

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

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

 **Note:**

Videos are not available for all products.

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## 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.

### Related links

[Using the Avaya InSite Knowledge Base](#) on page 28

## 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 <https://support.avaya.com>.
2. To log in, click **Sign In** at the top of the screen and then enter your login credentials when prompted.
3. Click **Product Support > Products**.
4. In **Search Product**, start typing the product name and then select the appropriate product from the list displayed.
5. Select the release number, if applicable.
6. Click the **Technical Solutions** tab to view articles for resolving technical issues.

### Related links

[Support](#) on page 28

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