

## Avaya Aura™ Session Manager

Transform existing infrastructure into on-demand services.

### Overview

Avaya Aura™ Session Manager is a key enabler of Avaya’s next generation communications offerings and the core of Avaya’s revolutionary SIP-based enterprise “cloud communication” based architecture.

This architecture makes it possible to unify media, modes, networks, devices, applications and real-time, actionable presence across a common infrastructure, creating the web-style on-demand access to services and applications that users increasingly expect from their enterprise communications solution.



The result is a platform for fully exploiting the value of converged communications, satisfying the needs of employees and customers, quickly distributing the enhanced applications that deliver improved performance while driving down overall costs and simplifying system management. Avaya Aura Session Manager SIP based routing provides real centralized control capabilities and significant improvements in scale and redundancy, enabling more cost effective and larger distributed enterprise deployments. Avaya Aura Session Manager overlays the existing PBX infrastructure helping to

ensure an evolutionary path forward that protects investment in today’s communications systems and software.

### In addition, Avaya Aura Session Manager delivers:

- Lower total cost of ownership
- Centralized infrastructure and management
- Single routing and dial plan control
- Integration of third-party equipment
- Reduction in wide area communications charges
- Lighting fast incremental application deployments without PBX upgrades

### Key benefits of Avaya Aura Session Manager:

- Business agility driven through holistic enterprise architectures for connecting users, applications and multi-vendor solutions.
- New cost savings from SIP connectivity and reduced PSTN usage through centralized, enterprise-wide routing techniques.
- Increased customer satisfaction by better connecting people and accelerating processes in real-time across the “customer ready” enterprise.

- Lower total cost of ownership with a centralized, easy to use management interface and introducing for the first time the ability to really deploy enterprise-wide central applications.
- Unprecedented enterprise wide scalability with support for truly global deployments of up to 100,000 users, 50,000 SIP endpoints, 500 Avaya Aura™ Communication Managers, and 25,000 locations with a single point of management.
- Rock-solid reliability and redundancy with the introduction of simultaneous endpoint registrations with two core Session Managers and a third Survivable Remote branch “mini” Session Manager.

## Avaya Aura Session Manager Capabilities

### Scale and Capacity

Up to 25,000 locations with more than 2 Million BHCC (Busy Hour Call Completions) of trunk and inter-location calling can be supported. In addition, up to 50,000 SIP endpoints can redundantly register with the Session Manager core and access services from up to 500 Avaya Aura Communication Manager instances and the other applications in the enterprise cloud. The Avaya Aura core has also been expanded to include up to 6 Session Manager servers.

### Reliability and Redundancy

For the first time ever, Avaya Aura employs the new IETF standard RFC 5626 to deliver multiple, simultaneous registrations to endpoints. Avaya and RFC compliant

endpoints can register with multiple core Session Managers and with a local branch Avaya Aura Survivable Remote Session Manager instance for a total of 3 simultaneous registrations. Combined with Avaya's unique application of SIP “Timer B”, this allows calls to be placed during network outages not only without dropping, but by only delaying calls for 2 seconds or less.

Additionally Session Manager now supports link aggregation - multiple active NIC connections to the customer's L2 network often referred to as “NIC Teaming” or “NIC Bonding”. Link aggregation allows Session Manager to deliver 5 9's+ reliability consistent with a variety of data center L2 topologies.

Finally, Avaya Aura enterprise cloud communications supports Avaya Aura Survivable Core processors in either duplicated or simplex configurations. Each Communication Manager main server instance can be backed up by up to 63 Survivable Core instances in the same or geo-redundant data centers.

### Third Party PBX Support

Avaya Aura supports connectivity to Cisco, legacy Nortel, Siemens, Alcatel Lucent, and other third-party PBXs as well as legacy Avaya and Nortel H.323, analog and digital endpoints with new, innovative “implicit” application sequencing. In addition, the application sequencing capabilities of Session Manager can also be applied to endpoints on third party PBXs.

### Endpoint Support

In addition to the Avaya SIP 9600 Series IP Deskphones, the award winning soft client Avaya one-X® Communicator, new cost effective 1603SW-I SIP handsets, Avaya 1100 series handsets with SIP software, and the existing Avaya 4600 SIP capable handsets may now all connect with Session Manager and receive SIP services from the core.

### SIP User Administration

Now with Avaya Aura™ System Manager 6.0, users can be administered from a single screen that will populate not only the necessary information in Communication Manager (acting as a feature server) but also within the Session Managers in the network providing the user's information for the entire enterprise from a single point-and-click interface.

### Third Party PBX Endpoint Application Sequencing

Because calls to and from users on third party PBXs (non-Avaya) can be directed to the Session Manager, applications can be applied to sessions to and from these endpoints. Session Manager provides the capability to create a profile for third party PBX users and add applications to be applied to these users to do things like blocking calls based on user preferences, directing calls to these users when they move across the Avaya Aura powered enterprise, and augmenting caller identification information for incoming and outgoing calls – all without upgrades or code modifications to existing third party PBX-equipment.

## Easy Lab Setup

The Avaya Solution Designer (ASD) design tool supports configurations for the Session Manager application sequencing core with complementary software to get any enterprise or developer quickly on board with Session Manager capabilities.

## Security

Session Manager can now connect to SIP entities and every endpoint in the enterprise with encrypted Transport Layer Security (TLS) connections using new software-based technology no longer requiring TLS acceleration hardware. In addition the System Manager Trust Management easy to use interface makes sending and applying unique third-party security certificates to any SIP entity easy to accomplish.

## SIP Connectivity

Supports SIP connections to:

- Avaya Aura Communication Manager
- Avaya Aura Messaging
- Avaya Aura Conferencing
- Avaya Voice Portal and Intelligent Call Routing
- Avaya G860 Gateway
- Avaya IP Office
- Avaya Secure Routers 2330/4134 and Secure Gateways
- Avaya Aura Session Border Controller
- ACME Packets Session Border Controller

## Dial Plan

Allows central enterprise wide dial plans across multi-vendor PBX environments implementing a uniform dialplan where required, or binding together multiple length dialplans in one centralized easy to manage database so users need not change the way they dial.

## Network Routing

Supports creation of system-wide network routing rules to cost effectively route calls using the enterprise's on-net IP network including:

- Enterprise-wide least cost routing
- Enterprise-wide alternate routing including routing around failures, following customer-provided priorities, and dynamically avoiding routes with bandwidth limits
- Enterprise-wide time of day routing
- Tail end hop off
- Toll avoidance

## Application Agility

Avaya Aura™ enhances user productivity while increasing business agility - by enabling faster, easier deployment of the right applications to targeted users and workgroups. The promise of Application Agility can now be delivered - with the appropriate collaboration, conferencing, customer handling and SIP-based applications. Each application can be added to an enterprise without any modifications upgrades to the other applications in the enterprise cloud including Communication Manager.

## SIP Tracing

Avaya Aura Session Manager leverages the central SIP session infrastructure architecture with flexible SIP tracing and trace displays that can be manipulated and filtered as debugging requires.

## SIP Monitoring

To assist with load balancing and alternate routing, Avaya Aura Session Manager allows the configuration and implementation of monitoring controls that can be adapted and customized for each link to the Avaya Aura Session Manager core.

## Active Geo-Redundancy

Avaya Aura Session Manager implementations may be distributed anywhere in the world with up to 6 Session Manager servers. Should it fail or become disconnected from all or part of the network, the affected network traffic is automatically moved to the remaining, functioning Session Managers.

## Call Detail Recording

Each instance of Avaya Aura Session Manager provides a third-party Call Detail Recording (CDR) interface so enterprise-wide CDR data can be recorded and saved.

## Avaya Aura Session Manager Solutions

Any SIP entity may be directly connected to the Avaya Aura Session Manager core as long as it is fully compliant with SIP standards. Solutions include:

## Highly Redundant IP Telephony

Connect up to 25,000 SIP Entities together including up to 500 Communication Manager instances in a redundant, centralized configuration. The introduction of the Avaya Aura Survivable Core and Survivable Remote allow each SIP endpoint to simultaneously register with up to three Session Manager instances, including the capability to provide full Communication Manager feature sets (well beyond the "SIPPING 26" features supported in the competition) in the branch when cut off from the enterprise core. In addition, with the introduction of the Communication Manager Evolution Server, the survivable branch can have a mix of SIP, analog, digital, and H.323 endpoints.

## Third Party PBX Integration

Avaya Aura Session Manager not only connects to Avaya Communication Manager, but also has been tested with Nortel CS1000, Cisco UCM, Siemens Highpath, Alcatel Lucent OmniPBX, etc. systems with direct SIP connections to the core Avaya Aura Session Managers. Each of these third party PBXs can be programmed to let the Avaya Aura Session Manager core do the inter-PBX routing so that central dial plan, alternate and priority routing and other

benefits can be enjoyed by the users of third-party PBXs as well as Avaya PBXs.

## Centralized Trunking

Avaya Aura Session Manager can be used to redundantly connect to the PSTN. Connections to the PSTN can be via the G860 gateway Avaya Aura™ Session Border Controller, or ACME Packet Session Border Controller to a SIP service provider.

## Centralized Messaging

The load balancing capabilities of Avaya Aura Session Manager and the star connectivity allows a single Modular Messaging instance to provide service (including lighting message waiting indicator lamps) for Avaya, Legacy Nortel, Cisco and other SIP-compliant PBX systems.

## Centralized Conferencing

A common Avaya Aura Conferencing server can be "shared" with the Avaya Aura Session Manager connected PBXs. Up to three Avaya Aura Conferencing systems may be added to the enterprise cloud to expand the scalability for large conferencing needs and still provide local access to conferencing resources avoiding mesh conferencing connections that waste bandwidth across large multi-data center enterprise configurations.

## Voice Portal and Intelligent Call Routing (ICR)

Geo-redundancy and load balancing capabilities can also be leveraged to provide a powerful contact center solution with Voice Portal 5.0 and the optional ICR with centralized SIP trunking to the core enterprise cloud.

## Learn More

To learn more about Avaya Aura Session Manager talk to your Avaya Account Manager or Avaya Authorized Partner. Also, visit us at [www.avaya.com](http://www.avaya.com).

## About Avaya

Avaya is a global leader in enterprise communications systems. The company provides unified communications, contact centers, and related services directly and through its channel partners to leading businesses and organizations around the world. Enterprises of all sizes depend on Avaya for state-of-the-art communications that improve efficiency, collaboration, customer service and competitiveness. For more information please visit [www.avaya.com](http://www.avaya.com).

The Avaya logo consists of the word "AVAYA" in a bold, red, sans-serif font. The letters are closely spaced, and the 'A's are particularly prominent.

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A red rectangular button with the text "avaya.com" in white, lowercase, sans-serif font.