

AVAYA



Avaya Customer Application Solutions



Converged Voice and
Data Networks
Customer Relationship
Management

Unified Communication

Supported by:
Avaya Labs and Services

Communication without boundaries

The Avaya Enterprise Class IP Solutions (ECLIPS) portfolio of mix - and - match server and gateway components provides enterprises with flexible options to meet individual converged voice and data networking needs. The sample applications detailed here will provide you with an in - depth understanding of how Avaya MultiVantage™ Software, Avaya Media Servers and Avaya Media Gateways can be deployed.

This portfolio offers a range of solutions that enable enterprises to tap into the power of converged networks.

Powered by rock - solid Avaya MultiVantage™ Software, the ECLIPS portfolio of components delivers on the Avaya promise to help enterprises realise their goals without reinventing their networks.

Avaya MultiVantage™ Software

Avaya MultiVantage Software is high-quality, high performance voice application software with rich call processing capabilities and contact centre functions. It supports widely accepted application-programming interfaces that work with a range of Avaya and third-party applications. This software is designed to meet country-specific networking requirements and bring continuous communications and application innovation to your enterprise.

Flexibility

Avaya MultiVantage Software is the core of the Avaya Enterprise Class IP Solutions (ECLIPS) portfolio. Offering mid-size to large enterprises greater flexibility, the new Avaya ECLIPS components can be combined with existing Avaya DEFINITY® Servers to create a network that meets your unique enterprise needs and preserves your existing investments—today and in the future. With Avaya MultiVantage Software, you can deliver applications over multi-protocol networks, and move to a converged network where and when it makes sense. The enhanced, distributed networking capabilities extend your applications to the edge of your organisation. And standards-based, extensible networking supported by Avaya MultiVantage makes it easy to add communications devices like mobile phones, PCs, and Pocket PC devices to your network.

Scalability

Avaya MultiVantage Software powers the new Avaya Media Servers, supporting over 12,000 IP endpoints on one system and over 1 million users per network. With up to three times the intelligent call-processing capability—up to 300,000 busy hour call completions—customers can scale up a single network to support a large headquarters location, or scale down to the smallest remote office cost effectively and reliably. This software supports uniform dial plan of up to 7 digits.



Reliability

Avaya MultiVantage Software brings decades of reliability and performance in software design into the world of IP telephony. Proactive remote monitoring and maintenance, combined with inherent self-diagnostics and self-healing capabilities, provides enterprises the highest levels of business continuity and up to 99.999% reliability.

Avaya Media Servers and Avaya Media Gateways

An integral part of Avaya ECLIPS, Avaya Media Servers and Avaya Media Gateways provide highly flexible, scalable, and standards-based components that can be mixed and matched to create customised solutions. Powered by Avaya MultiVantage Software, they enable the centralised management efficiency of a single streamlined network—while delivering best-in-class call-processing quality and reliability that have made Avaya the communication solution that more than 90% of FORTUNE 500® companies rely on every day.



Customer Application Solutions

The Avaya ECLIPS portfolio of modular components provides enterprises with flexible options to meet their individual converged voice and data networking needs. Below you'll find profiles of three typical customer applications.

Mission - critical communication solution for small to mid size offices with 40-450 users

Avaya MultiVantage Software with Avaya™ S8300 Media Server and Avaya™ G700 Media Gateway

The Avaya™ S8300 Media Server/Avaya™ G700 Media Gateway combination offers the flexibility and reliability that growing companies need. With the full capabilities of Avaya MultiVantage Software and an internal Layer 2 Ethernet switch, this scalable solution can be used as a total converged, stand-alone solution for a growing or mid-size enterprise, or as a distributed solution with survivability.

The benefits of a media server/media gateway combination provide a standards-based, IP communications infrastructure—without compromising applications, reliability, and multiservice networking. The solution is modular and supports stackable, hot-swappable, redundant architectures. It can be integrated with the Avaya P330 stackable switching system to provide a single, fault-tolerant, highly flexible voice and data solution, including power over Ethernet support. The Avaya™ IA 770 Multimedia Messaging Application, embedded in the Avaya G700 Media Gateway, delivers voice and e-mail in a way that enhances and simplifies the exchange of information within small enterprises, as well as small locations of large enterprises.

Perfect as a remote-edge device

The Avaya G700 Media Gateway configured with a local survivable processor (LSP with the Avaya S8300 Media Server) is also a great solution as a remote-edge device for remote/branch offices of a larger enterprise network. This configuration leverages the distributed architecture benefits of the media gateway concept and provides for mission-critical operation via a local survivable processor, as well as a standards-based IP communications infrastructure that doesn't compromise applications or reliability.

Implementation profile: "ABC Company"

To illustrate how the Avaya S8300 Media Server and G700 Media Gateway solution might be implemented in the field, take a look at a hypothetical company: ABC Company.

While this solution could be applied to any number of industries, for purposes of illustration, let's say ABC Company is a high-tech company that currently has nearly 200 employees and expects to grow. ABC Company is seeking a converged solution that is flexible, works with multiple technologies, is extensible, and has standard interfaces to integrate new applications or software. The management also wishes to add packaged applications such as multimedia messaging, e-mail, and a contact centre, but realises that they may have to replace their current equipment to do so. The existing data infrastructure is generally current, but a network assessment is needed to help ensure that the company is able to support convergence technology. ABC Company has one location with a high percentage of remote workers and telecommuters. Since it would like to leverage a single infrastructure for all communication devices, the company is planning on installing primarily IP phones.

The solution: Avaya S8300 Media Server and Avaya G700 Media Gateway, powered by Avaya MultiVantage Software

The Avaya S8300 Media Server and Avaya G700 Media Gateway—powered by Avaya MultiVantage Software—provide ABC Company with a complete solution that's easy to buy, easy to install, easy to maintain, and includes a data switch. There is no need for ABC Company to purchase and integrate separate voice, multimedia messaging, data, and contact centre capabilities—it's all included in the solution. This single, streamlined network means the company does not have to worry about separate wire drops going out to every desk for voice and data. Nor does it have to worry about multiple circuit packs and expansion cabinets. The company can simply take advantage of the same network used for the PCs that are already on employees' desktops.

Driven by Avaya MultiVantage Software, the Avaya S8300 Media Server/Avaya G700 Media Gateway combination incorporates ABC Company's existing trunking and any other line interfaces, such as analogue phone interfaces, to support analogue phones and fax machines. Additional trunking requirements such as analogue and E1 are also integrated into the Avaya G700 Media Gateway.

With a truly converged infrastructure and Avaya™ IP Agent, ABC Company no longer needs to support its remote contact centre agents by maintaining costly, redundant PBX systems in remote locations. Now, with Avaya MultiVantage Software and Avaya IP Agent, the full capability of the office network is distributed to any remote location over the existing, low-cost IP backbone. Remote contact centre employees receive full network functionality, including all the voice functions available to agents working in the office. And contact centre supervisors get all the tracking and performance reports they need to monitor their remote pool of agents, just as if they were located in the same office. Contact centre functionality such as intelligent call routing and call balancing is built right into Avaya MultiVantage Software.



Overall, the Avaya S8300 Media Server/Avaya G700 Media Gateway combination provides ABC Company with a complete convergence solution that's easy to install, operate, and maintain. It gives the company all the cost savings of a streamlined voice and data network, with the powerful contact centre and remote agent capabilities it needs to stay a step ahead of the competition.

Integrated communications systems for distributed network environments with 450 users

Avaya MultiVantage Software with Avaya™ S8700 Media Server and Avaya™ G600 Media Gateway. The Avaya S8700 Media Server and the Avaya G600 Media Gateway, powered by Avaya MultiVantage Software, are designed for enterprises with distributed networking requirements that need to reduce their communication costs and implement quickly. The Avaya S8700 Media Server/Avaya G600 Media Gateway combination delivers exceptional reliability with duplicated Intel® servers running Linux™. It utilises modular media gateway technology based on the Avaya™ IP600 Communication Server architecture, delivering scalability and reliability. It is ideal for those who want to manage a single system from a central location.



Implementation profile: “XYZ Local School District”

To illustrate how the Avaya S8700 Media Server and Avaya G600 Media Gateway solution might be utilised, in a distributed network environment, take a look at a hypothetical local school district scenario. Keep in mind that this solution would be applicable to many enterprises or government organisations where there is a need for distributed network convergence in a mid-sized to large organisation with 450 users.

XYZ Local School District services nearly 9,000 students in two high schools, four middle schools, and seven elementary schools. The goal of more than 400 classified staff is to keep the district running smoothly from these various school locations and the main district office, in which the district's IT department runs a data centre. Gaps in their existing technology—different multimedia messaging systems, separate phone systems, no network connection between offices, no redundancy—were making this goal difficult and expensive to reach. The consequences of bad communication could range from inefficiency and frustration to perceived inequality among schools and a loss of public confidence in the district.

The ideal solution for XYZ Local School District will create a common network with a centralised source at the main district office that controls all remote locations. With 13 separate schools and likely future additions to match community growth, it's critical for this solution to excel at support for multiple remote locations. At the same time, the district doesn't have to be concerned with mission-critical support at every location—a short lapse in communication is not likely to affect a normal school day.

Each site must have its own trunks, yet be administered from a central location. All school and administration buildings will be networked together and must leverage centralised multimedia messaging.

The Solution: Avaya S8700 Media Server and Avaya G600 Media Gateway, powered by Avaya MultiVantage Software

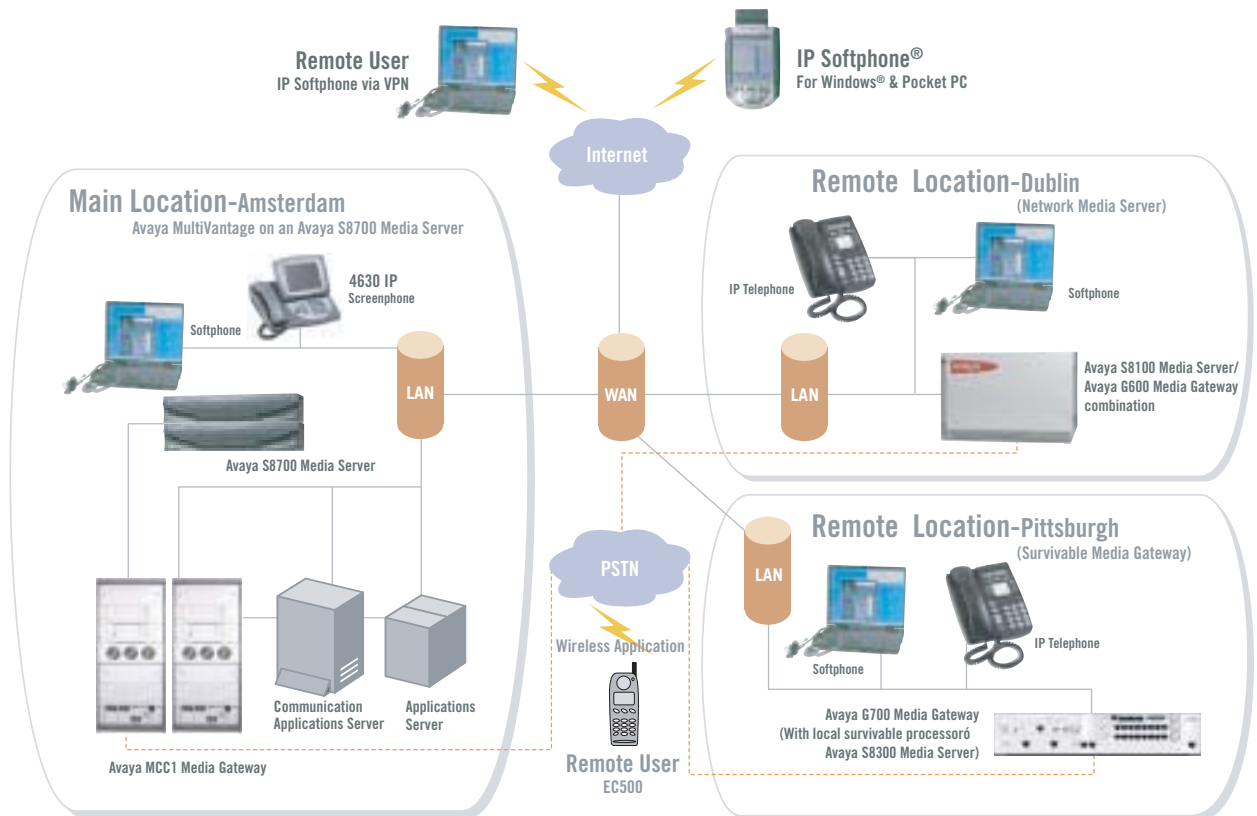
This solution enables XYZ Local School District to distribute robust call processing across multiple locations, while still hosting primary networking from a single centralised server as a single managed entity. The Avaya S8700 Media Server and G600 Media Gateways located in the administration building support additional Avaya G600 Media Gateways located in each of the district's schools.

Running on the central Avaya S8700 Media Server, Avaya MultiVantage Software provides more than 500 call-processing features to each location via remote Avaya G600 Media Gateways. Staff efficiency is vastly improved through integrated multimedia messaging and call forwarding, simplified conference calling, and more. The streamlined management aspect has created significant ongoing cost savings as the school district reduces redundant PBX systems and voice-dedicated systems, as well as on-premises maintenance procedures.

Increased efficiency for everyday tasks and overall network operation is just the beginning. There are now a number of new productivity-enhancing capabilities available to the school district's staff. For example, Avaya™ EC500 Extension to Cellular gives the board of education members the ability to bridge their business line to a mobile phone, providing single-number access, regardless of the mobile carrier provider. Avaya VisAbility™ Management Suite gives system administrators the tools they need to manage the communications needs of a constantly changing group of students, faculty, and administrative staff.

Overall, the solution provides the local school district with streamlined, reliable network distribution across all of the schools and administration buildings. Deployed with unmatched Avaya MultiVantage call processing capability, the network lowers the school district's expenses and increases productivity, while providing continuity in their communications.

**Mission-critical network for the largest distributed enterprise,
with high-end contact centres that are experiencing growth**



Solution: Avaya DEFINITY® ECS Communications Server migrated to an Avaya S8700 Media Server with a variety of Avaya Media Gateways



Avaya DEFINITY ECS Communications Server migrated to an Avaya S8700 Media Server with a variety of Avaya Media Gateways

The Avaya S8700 Media Server, combined with one or more of the Avaya Media Gateways, that is powered by Avaya MultiVantage Software, delivers increased processing power—a strong plus for contact centre customers as well as customers evolving to IP telephony. More processing power also provides the capability to increase other system capacities, including up to 12,000 IP endpoints per system, and the opportunity to consolidate systems for more efficient, centralised management. The Avaya S8700 Media Server contains two redundant servers that help ensure business continuity and maximum uptime.

Implementation profile: “Products Inc.,” a multi-national company

To illustrate how the Avaya S8700 Media Server can support various Avaya Media Gateways and allow enterprises the flexibility to support unique configurations in remote locations, take a look at the following hypothetical multi-national company’s business scenario. Keep in mind this solution could be applicable to many enterprises or government organisations that have different communications requirements for their remote locations. Products Inc., a hypothetical multi-national corporation, has a large contact centre operation in the headquarters location but needs to expand in order to provide better service to its customer base. It also has a remote office used for administration. To increase global presence, their plans include a new location in Pittsburgh, (USA).

Products Inc. is looking for the best option to support and service customers at all locations. It needs to maximise its existing infrastructure while improving service to its customers. All locations will require local trunking for emergency calls and local access.

Corporate headquarters in Amsterdam, Netherlands, currently supports an Avaya DEFINITY ECS Server with 5,000 stations and 500 contact centre agents. Business continuity is critical, as the contact centre must remain up and running 24/7.

An existing location that provides administrative functions is located in Dublin, Ireland. This location currently has an Avaya IP600 Internet Protocol Communication Server installed and utilises multimedia messaging capabilities that are co-resident on that communications system.

A new 100-station remote office will be built in Pittsburgh, (USA). This location must not have any disruption in service. 90% of the stations will be IP enabled. There is little or no future growth planned as this site; it is the backup location for corporate headquarters.





The solution:

- Migrate main site to Avaya MultiVantage and an Avaya S8700 Media Server
- Upgrade Avaya IP600 Internet Protocol Communication Server to Avaya MultiVantage Software
- Add an Avaya G700 Media Gateway (LSP - Avaya S8300 Media Server) to new location.

Avaya MultiVantage provides the primary processing capabilities at Products Inc. headquarters and is distributed to different geographical locations, over existing IP broadband connections. Products Inc. upgraded the existing Avaya DEFINITY ECS (Avaya MCC1 Media Gateway) platform at its headquarters location to an Avaya S8700 Media Server this elevates them to industry-standard servers on a Linux operating system with the option to add increased processing power and enhanced capacities at a faster pace than the current platform. Built on the Linux operating system, the Avaya S8700 Media Server provides Products Inc. with the same legendary reliability as the Avaya DEFINITY ECS Server. The advantages and enhancements of Avaya MultiVantage Software include the ability to extend rich network functionality to the edge of the enterprise. Products Inc. can use an Avaya S8700 Media Server to support up to 12,000 IP endpoints and a total of 36,000 mixed endpoints to meet their capacity requirements.

Centralised IP voice capabilities eliminate the need for redundant voice messaging infrastructure and system management. And advanced voice monitoring capabilities via Avaya VisAbility Management Suite enable system administrators to monitor voice traffic, providing real-time feedback on voice quality and reliability. They can even set administrator alarms if specified thresholds are exceeded.

The Avaya IP600 Server located in the administration office will need to be upgraded to Avaya MultiVantage. This solution retains its existing hardware, but with the Avaya MultiVantage Software upgrade the hardware components now become an Avaya S8100 Media Server with an Avaya G600 Media Gateway. This will preserve the company's current investment and make it easy to upgrade to Avaya MultiVantage. The site will experience the added benefit of being networked to the headquarters location. In doing so, it will allow for networked multimedia messaging and feature transparency from the headquarters location to the remote site. The benefits of having consistent software (Avaya MultiVantage) across the network enable the remote locations to experience all the same feature capabilities as the headquarters location.

The Avaya G700 Media Gateway in the company's Pittsburgh, (USA) office features a Local Survivable Processor (LSP with an Avaya S8300 Media Server). In the event that contact is lost with the Avaya S8700 Media Server at the headquarters location, the Pittsburgh, (USA) office continues to operate without loss of service continuity.

Avaya MultiVantage Software delivers call-routing capabilities for the company's headquarters contact centre, providing it with the large, sophisticated, multisite contact centre capacity it needs to meet the rising service expectations of its customers and the rising cost-reduction expectations of its executives.



Avaya MultiVantage Software matches the caller with the most appropriate agent—even across multiple centres—and provides agents with screen pops and centre statistics to improve their productivity. Its detailed reporting capability enables your contact centre managers to run their operations with maximum efficiency.

With Avaya IP Agent, customer-service agents have complete remote agent capabilities. Agents have access to the full range of Avaya agent capabilities using a graphical user interface that works via standard drag-and-drop conventions. This enables Products Inc. to locate its customer service centre wherever it makes the most sense—perhaps in different time zones to provide around-the-clock customer support.

Overall, this solution provides Products Inc. with the flexible solution it needs to leverage its current communications technology investments where it makes sense, and provide remote locations with the redundancy and survivability they need to maintain critical enterprise communication continuity.

The contact centre functionality built into Avaya MultiVantage Software, together with Avaya IP Agent and Avaya IP Softphone, gives the company the power it needs to take its network to the edge of the enterprise, so remote and mobile workers can be more productive than ever before.

Maximise Converged Network Investments with Avaya Services

Maximise the benefit of converged network solutions by leveraging the award-winning expertise of Avaya Services to plan, design, and implement reliable and secure advanced solutions. Team up with Avaya's 11,000 global service professionals, in addition to its network of Authorised Avaya BusinessPartners, to protect investments, reduce implementation and training costs, and more effectively integrate converged network solutions into existing and planned network infrastructures.

Migrate to IP While Leveraging Your Current Technology

Designed to meet the goals of today's enterprises and government organisations—growing revenue, reducing costs, and utilising resources more efficiently—Avaya Enterprise Class IP Solutions (ECLIPS) and Avaya MultiVantage Software offer a welcome alternative to a total reinvention of voice and data networks.

Now enterprises don't have to reinvent; they can rethink by leveraging current investments in Avaya or others while migrating toward a fully converged network. Or, they can build a fully converged network from the ground up with the peace of mind that the investments they make today won't have to be reinvented tomorrow.

Leadership and Innovation in Communication

Avaya is a global leader and innovator in enterprise communications serving customers who require superior communications technology to power their business. Over 90% of the FORTUNE 500® and government organisations rely on Avaya for secure network infrastructures and reliable voice and data applications that power faster decisions, profitable transactions, and closer relationships between customers, employees, and suppliers.

Contact your Avaya representative or Avaya BusinessPartner today for more information.

AVAYA

Performance figures and data quoted in this document are typical, and must be specifically confirmed in writing by Avaya before they become applicable to any particular order or contract. The company reserves the right to make alterations or amendments to the detailed specifications at its discretion. The publication of information in this document does not imply freedom from patent or other protective rights of Avaya, or others. All trademarks acknowledged.