AVAYA

Avaya Communications Architecture

Software, infrastructure, and services that help enable the adaptive enterprise

| IP Telephony | Contact Centers | Unified Communication | Services |

Nimble and decisive, today's enterprise must adapt quickly to ever-changing challenges and the opportunities to grow revenue and capture market share.

This pace of change results in new business imperatives that have many enterprises looking for ways to increase operational efficiency and effectiveness, but they are often faced with doing more with less.

Concurrently, the enterprise has increased requirements to optimize security and business continuity in order to manage and lower risk. Control is vital.

That same control must be harnessed to support the realities of business, those that never change: the need to drive revenue and serve customers better every day.

Enterprises have it in their power to achieve these goals and deliver superior results that improve the bottom line. Avaya is enabling enterprises to deliver these objectives through the Avaya Communications Architecture—a consistent, modular framework highlighted by applications, systems, and services that simplify the complex while working with existing infrastructure to optimize productivity, network performance, and investments.

It doesn't stop there. Helping to serve increasingly distributed and mobile global organizations and to leverage their skills and core competencies, Avaya provides a single point of accountability for convergence. It provides this in multi-vendor environments, giving you the ability to reap business results at your desired pace and path.

The Avaya Communications Architecture combines world-class software, hardware, and global services to help your enterprise receive the benefits of reduced operating costs, faster deployment, and a more flexible communications infrastructure that reacts to your company's changing needs.

The centerpiece of the Avaya Communications Architecture is Avaya MultiVantage™ Communications Applications, a set of solutions for telephony, contact centers, messaging, and unified communication.

Built on industry-standard protocols, the Avaya Communications Architecture and Avaya MultiVantage Communications Applications provide the flexible platform to meet the demands of your business: growing revenue, reducing costs, and lowering risk.

What does this mean? It means peace of mind. Avaya provides a single point of accountability and the chance to reach a higher plane of communication.

The Avaya Communications Architecture

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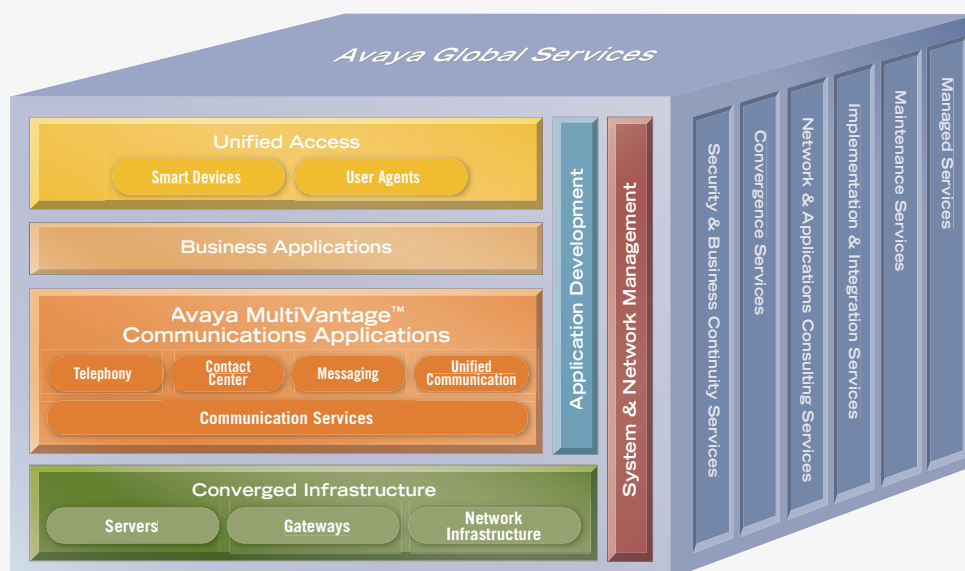
Flexible Communications Technology That Drives Business Results

Take control with unified messaging. Improve customer relations with state-of-the-art inbound or outbound contact center self-service solutions from Avaya. Increase efficiency and responsiveness while reducing cost and risk. Communications must enable businesses to grow revenue, not stand in the way. That's how the Avaya Communications Architecture and Avaya MultiVantage Communications Applications provide solutions that you can rely on.

Telephony

When it comes to telephony, Avaya Communication Manager offers the greatest range and breadth of solutions. That should come as no surprise, given decades of industry leadership by Avaya in voice technology.

Telephony works over industry-standard data networks and servers, allowing businesses to enjoy all the benefits of traditional voice systems—but with far greater flexibility and scalability—and Avaya will help you find the right solutions, whether you have 20 users or a million.

Less expensive to operate than the traditional PBX, IP telephony solutions built on Avaya Communication Manager also offer the business continuity and security you need. It takes seconds to shift voice traffic to remote sites, as needed, to handle whatever the situation requires.

Avaya telephony solutions serve nearly any employee need. Through a universal inbox for voice mail, e-mail, and fax, users are in control of all their communications. Intelligent call routing across your building, campus, or the Internet keeps them in touch, wherever they might be. Virtual meetings and automated call screens increase efficiency and teamwork. Together, these solutions turn converged voice and data into a strategic ally to increase revenue and improve operational efficiency while lowering costs.

Unified Communication

Avaya Unified Communication Center (UCC) offers users one friendly interface to the network services they use most. Avaya UCC empowers employees with quick and easy access to the communications tools and information they need to be highly productive while traveling or working from a remote office. Through speech commands from any phone, Web browsers. or wireless handheld devices such as PDAs, Avaya UCC users can easily gain access to their calling and conferencing capabilities, calendars and tasks lists, messages and corporate directories and databases.

With Avaya UCC you can easily stay connected using whatever device is most convenient at the time. Your customers can call one number to reach your key salespeople, no matter where they happen to be working that day. Being more productive, being more responsive to customers, and giving your enterprise a competitive edge—that's what Avaya UCC is all about.

Unified Access

IP telephones? Wireless telephones? Digital and analog wireless phones? The Avaya Communications Architecture and Avaya MultiVantage Communications Applications support them all, providing users with the smart devices that best fit their needs and working requirements: sitting at a desk, roaming around the building, working at a PC using IP softphone technology, or even using a PDA or wireless enterprise handset.

Avaya Communication Manager even reaches into the field using the Avaya Extension to Cellular mobility communications solution. As long as the user is in a cellular-accessible area, Avaya Communication Manager transparently bridges calls received by an Avaya Communications Server to any digital cell phone—regardless of location or wireless service provider. Continuous availability, independent of location, gives your employees a competitive edge.

Software Applications That Go the Extra Mile

Fifty years ago, business communications with customers or field offices meant mailing a letter or making a personal visit. Two decades ago, it meant picking up the telephone or sending a fax. In today's highly distributed, highly accelerated environment, effective communication comprises real-time speech and e-mail, with people managing an ever-increasing flood of information. Avaya MultiVantage Communications Applications are at your service, from round-the-clock contact centers to multi-site communications networks.

Contact Center

For enterprises of all sizes, Avaya contact center solutions meet customer needs reliably and profitably. Avaya is ranked #1 worldwide in call center systems and solutions, and #1 in the United States for interactive voice response. With a clear and strong heritage in the communications space, Avaya brings experience and expertise virtually unmatched in the industry.

Avaya supports more than 20,000 contact centers worldwide and is a leader in helping organizations address the challenge of delivering effective service across multiple channels. The Avaya Customer Interaction Suite delivers solutions to enhance customer experiences through powerful, integrated Contact Management, Self-Service, Proactive Contact, and Operational Effectiveness solutions.

Whether it's adding a new channel of interaction, minimizing hold times, providing self-service options, or archiving all online and offline communications, Avaya delivers the convenience, multi-channel focus, and personalization that are essential to nurturing relationships and building repeat business.

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Avaya Customer Interaction Suite combines multimedia integration, self-service and process automation, efficient and effective contact routing, and work distribution engines. Excellent service level management capabilities, data integration, and powerful management and reporting solutions provide maximum efficiency and effectiveness in small to large enterprises. Avaya contact center solutions provide the industry's best applications for connecting people and processes to increase customer loyalty and deliver measurable business results.

For example, the Avaya interactive response solution deploys self-service capabilities that help you get more done with less—it's the path to improving customer satisfaction while reducing operating expenses through software-based speech and IVR applications.

Messaging

When it comes to keeping employees in touch, Avaya messaging solutions combine scalability, reliability, and availability—whenever and wherever they're needed. With Avaya INTUITY™ AUDIX®, OCTEL®, and Unified Messenger® systems and the new standards-based Avaya Modular Messaging and Avaya Message Networking solutions, Avaya provides choices to meet the messaging needs of virtually any enterprise.

The new Avaya Modular Messaging delivers leading-edge voice and fax messaging with outstanding functionality and reliability. The benefit? Employees can better manage their time, which allows them to collaborate 24/7 across the virtual enterprise—even when working remotely at home offices, at customer sites, or on the road. Modular Messaging offers a highly flexible approach to implementation that can

help reduce costs, simplify administration, and improve communications and business continuity across the enterprise.

Avaya Message Networking links stand-alone, multi-vendor messaging systems throughout an organization into one company-wide messaging network. Using a "store and forward" approach to networking, Avaya Message Networking receives a message, performs the necessary protocol conversions, and delivers the message to one or more recipients on one or more messaging systems.

Each messaging system is directly linked through Avaya Message Networking to every other messaging system; new systems can be added easily, without affecting existing servers. Plus, Avaya Message Networking will connect to almost any vendor's messaging system, protecting existing messaging system investments.

Hardware Platforms Support the Toughest Communications Challenges

Avaya offers IP telephony media servers and media gateways that meet the needs of any enterprise. Forget proprietary solutions that restrict flexibility; Avaya technology is based on Intel® Pentium® processors and the Microsoft® Windows® and Linux® operating systems. This maximizes integration with multi-vendor networks. With Avaya open-standards communications platforms, you will achieve maximum return on communications, reduce costs, and lower risk.

The following are among the powerful Avaya Media Server and Media Gateway offerings:

- Avaya S8700 Media Server with Avaya G600 Media Gateway is designed to meet the needs of midsize to large, integrated communications systems buyers with 450 to 10,000 stations and distributed network and campus environments.

- Avaya S8300 Media Server with Avaya G700 Media Gateway meets the mission-critical communication needs of branch offices, and global, multi-site, networked customers with 40 to 450 stations.

- Avaya S8100 Media Server with Avaya G600 Media Gateway provides an all-in-one, IP-ready telephony solution for the small to mid-size and small-of-large enterprises requiring integrated messaging, contact center and systems management, and administration.

Designed specifically for converged network environments, the full line of security gateways and multi-platform client software allows enterprises ranging from small offices to the largest distributed, multi-national organizations to protect information assets. Avaya provides MultiVantage Communications Applications to all users across LAN, WAN, Internet, and wireless networks—enabling secure communications.

Media and Security Gateways

Avaya offers a complete line of media gateways designed to seamlessly link analog, digital, and IP communication devices across LAN, WAN, Internet, wireless, and even cellular networks. Sold with the media servers, the media gateways are the base of the Avaya Communications Architecture, allowing enterprises to take full advantage of MultiVantage Communications Applications while leveraging return on investment in their existing infrastructure.

Avaya Security Gateways offer comprehensive security solutions that extend firewall, security zone, access control, and VPN coverage to enterprises deploying IP telephony, call center, mobile voice/data workforce solutions, and wireless IP communications solutions.

Network Infrastructure

Choosing Avaya for network infrastructure solutions helps ensure that your business's LAN, WAN, and wireless networks meet the service demands of voice, data, and video, with the reliability and accountability you've come to expect from traditional telephony solutions.

Avaya offers complete end-to-end network infrastructure solutions, including high-availability modular and stackable IP telephony platforms, converged LAN core and backbone switches, data center and load-balancing devices, and integrated voice/data office solutions. Avaya also offers a complete line of wireless LAN solutions, including

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access points, access servers, and outdoor routing systems—everything needed to enable secure wireless data and IP voice communications across a department, floor, building, or campus.

Avaya combines Communication Manager with media servers and gateways to deliver enterprise class IP solutions.

Increase Real-World Performance with Avaya Tools and Global Services

Avaya can help you make better use of your internal resources, help your budgets go further, and help you focus on your core competencies. And when you work with Avaya, you're working with the people who build and manage communications networks for more than one million customers worldwide, including more than 90 percent of the FORTUNE 500®.

Systems and Network Management

Avaya Integrated Management portfolio provides a comprehensive set of tools that make it easier for customers to manage complex network infrastructures. The applications in Avaya Integrated Management manage both voice and data communications through a common Web-based user interface designed for System Management, Network Management and Application Integration platforms. The Avaya Integrated Management portfolio can improve network uptime, increase staff productivity and reduce operating costs.

Avaya Integrated Management helps users deliver and manage a no-compromise, converged network solution with the functionality and Quality of Service (QoS) that meets the most demanding needs. With this comprehensive set of tools, users gain an end-to-end view of their system. Users can configure, monitor, and optimize the performance of Avaya Media Servers and Gateways, monitor voice over IP traffic, manage QoS policies, and control IP voice network quality.

Integrated Management provides solutions to solve business problems, and lower operational costs through reliability, scalability, flexibility, investment protection, and support of a multi-service, standards-based network.

Because extensibility and manageability are designed into each hardware and software component of the Avaya Communications Architecture, your Avaya solution is easier to install, easier to customize, easier to administer, and easier to monitor than ever before.

Application Development

The Developer*Connection* Program is a part of Avaya Application Development:

- Bringing solution innovators and industry leaders together to work toward a common goal: to blend their complementary products, services, and technologies

- Enabling the creation of a new generation of innovative communication solutions

- Each targeted to fit a particular market need

- Each tested for compliance and interoperability at the Avaya Labs facilities in Lincroft, New Jersey, to provide the quality you expect from Avaya

Supported across a range of Avaya platforms at four levels of member participation, the Developer*Connection* Program provides marketing, support, and sales benefits.

Avaya Global Services

Many companies can no longer afford in-house expertise to manage and administer today's complex communications environments. That's why they rely on Avaya Global Services. Working with Avaya can help you cut costs and increase productivity. Whether it's day-to-day network or system administration or a long-term strategy for voice and data convergence—a one-time project or an extended relationship—Avaya Global Services provides you with resources, expertise, and state-of-the art tools that are simply not available anywhere else.

Avaya Global Services offers a single point of accountability to design, build, and manage multi-vendor communications networks worldwide. From needs assessment to business continuity planning, from deployment to maintenance, Avaya Global Services can help you do more than ever before, with less than ever before. Plus, Avaya provides a single point of accountability for convergence in multi-vendor environments, providing you with the confidence and ability to reap business results at your own pace.

Avaya Global Services can act as a resource for existing IT departments, or it can assume full responsibility for designing, building, or administering the data network and communications applications. Avaya Global Services outsource management and maintenance solutions offer predictable costs, while implementation and integration services support on-time project completion, so you can

best realize your total cost of ownership and return on investment objectives.

Avaya offers comprehensive network security services that address policy, assessment, and design for multi-vendor voice, data, and converged networks. Expert, certified consultants provide recommendations to address firewalls, secure authentication, and leading-edge encryption for data and voice privacy inside the network, over the WAN, and across the Internet.

Avaya MultiVantage Communications Applications in Action

To illustrate how the Avaya Communications Architecture and Avaya MultiVantage Communications Applications can help a business drive superior results through communications, take a look at the following hypothetical business scenario.

Products Inc., a fictitious multi-national corporation, has a large contact center operation in one location but needs to expand in order to provide better service to its

customer base. It also has a remote office used for administration and is planning to open three sites in different parts of the world for improved coverage and local presence.

Products Inc. needs to maximize its existing infrastructure while improving service to its customers. This has to be done while securing the networking infrastructure from external and internal threats and ensuring recoverability in the face of unexpected crises or natural disasters. All locations will require local trunking for e911 and local access.

The corporate headquarters currently supports an Avaya DEFINITY® Enterprise Communications Server (ECS) with 5,000 stations and 500 contact center agents. Business continuity is critical, as the contact center must remain up and running 24/7.

A new 100-station branch office, which is under construction, must not have any disruption in service. Ninety percent of the stations will be IP enabled, and another 40 field sales and service professionals will work out of that location. There is little or no future growth planned at this site, which will also serve as the backup location for corporate headquarters.

Needs Assessment

The solution began with Avaya Global Services, to help plan and design a network optimized for IP telephony. These tasks included LAN/WAN assessment, design, and optimization of existing and planned network elements, including IP telephony option settings to help ensure voice and data quality end to end.

There were also key security and business continuity assessments. These important steps resulted in policies and architectures for reducing corporate vulnerability, as well as plans to swiftly recover the communications system in the unlikely event of a disaster. The recommendations included the appropriate architectures and ongoing tests to assure employees, customers, leadership stakeholders, and regulators that all possible disaster/crisis scenarios have been addressed and planned for.

The Solution

After the assessments, the recommendations were as follows:

- Migrate main site to Avaya Communication Manager and Avaya S8700 Media Server

- Add Avaya G700 Media Gateways and Avaya S8300 Media Servers at new locations

- Enable Avaya Unified Communication Center (with UCC Speech Access) at all locations

Avaya MultiVantage Communications Applications and Avaya Communication Manager provide the primary processing capabilities at Products Inc. headquarters and are distributed to different geographical locations over existing IP broadband connections.

Products Inc. upgraded the existing Avaya DEFINITY ECS platform at its headquarters location to an Avaya S8700 Media Server; this elevated the company to industry-standard servers on a Linux operating system with the option to add increased processing power and enhanced capacity at a faster pace than the current platform.

Centralized IP voice capabilities eliminate the need for redundant voice messaging infrastructure and system management. And advanced voice monitoring capabilities via Avaya Integrated Management Suite enable system administrators to monitor voice traffic and obtain real-time information about voice quality and reliability. They can even set administrator alarms if specified thresholds are exceeded.

Avaya Communication Manager delivers call routing capabilities for the company's headquarters contact center, providing it with the large, sophisticated, multi-site contact center capacity it needs to meet the rising service expectations of its customers and the increasing cost-reduction expectations of its executives.

For Products Inc., being out of the office no longer means being out of touch. Mobile workers benefit from the speech access capabilities of the Avaya UCC. Whether working from home or a client location, employees enjoy ready access to Avaya MultiVantage Communications Applications features—voice and e-mail messages, company directories and ad hoc conference calling—through simple spoken commands. UCC Speech Access can even read e-mail to the user over the phone, allow the user to check and make appointments, and more.

This solution provides Products Inc. with the services needed to leverage its current communications technology investments, and provide remote locations with the redundancy, survivability, and features they need to improve employee productivity and efficiency.

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. Avaya provides secure network infrastructures and reliable voice and data applications that power faster decisions, profitable transactions, and closer relationships between customers, employees, and suppliers.

To learn more, talk to your Avaya Client Executive or Authorized Avaya BusinessPartner. Also, visit us at **avaya.com/learnmore/ip**. For more information about Avaya and our other award-winning solutions, visit **avaya.com**.

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About Avaya

Avaya enables businesses to achieve superior results by designing, building and managing their communications networks. More than one million businesses worldwide, including 90 percent of the FORTUNE 500®, rely on Avaya solutions and services to enhance value, improve productivity and gain competitive advantage.

Focused on enterprises large to small, Avaya is a world leader in secure and reliable IP telephony systems, communications software applications and full life-cycle services. Driving the convergence of voice and data communications with business applications — and distinguished by comprehensive worldwide services — Avaya helps customers leverage existing and new networks to unlock value and enhance business performance.

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