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AVAYA

Global Strategic Alliance





IP Telephony

Contact Centres

Mobility

Services

For more information on Extreme Networks and Avaya, please see:

Extreme Networks Corporate Web Site: <http://www.extremenetworks.com>

Avaya Alliance Web Site: <http://www.extremenetworks.com/partners/AvayaAlliance.asp>

Avaya Corporate Web Site: <http://www.avaya.com>

Extreme Networks Alliance Web Site: <http://www.avaya.com/extreme>

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AVAYA**extreme**
networks

Enterprises today are placing greater reliance than ever on their IP networks to deliver an increasing level of benefits and services to their customers, suppliers and employees. So when considering a strategic investment in voice and data integration, it pays to look at the whole picture.

Intelligent Communications

Often, the first consideration for implementing a converged voice, data and video network using Internet Protocol (IP) technology is its ability to help contain operational costs and deliver significant savings through toll bypass. However, from a strategic perspective, IP telephony and its underlying converged network can act as an enabling technology, facilitating more responsive customer relations through next-generation contact centers and making employees more productive with applications like collaborative computing. The advantages of convergence are truly open-ended and the boundaries continue to be pushed in the ways that progressive organizations exploit IP technology.

We recognize that there are a number of key issues affecting enterprises like yours, driving the need for your communications infrastructure to evolve commensurately with your business:

Globalization

Nowadays, it is not uncommon for small and medium-sized businesses to operate internationally – often globally – with far-flung suppliers and dispersed customer bases. Even companies that are only active within local markets may still need to be available on a round-the-clock basis to partners and suppliers on other continents.

Growth

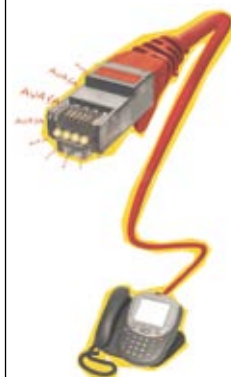
Enterprises across all industries strive for continuous, profitable growth, which often manifests itself in expansion and subsequent consolidation of the business. Expansion can present a timely opportunity to reinvent and tune a company's infrastructure to increase competitive responsiveness. Consolidation requires an organization to address the challenges of attempting to homogenize two disparate entities, with a need for renewed focus on interoperability and rapid evolution of network infrastructure to effect seamless communications across newly merged business units.

Virtualization

Increasingly flat organizational structures and the need to mobilize global resources mean workforces are becoming less centered on a physical location, often preferring to operate closer to customers or in more cost-efficient locations. Practices such as working from home are becoming more widespread. Remote or virtualized call centers evidence a trend towards outsourcing. Mobility solutions are required as the expectation for “always on, always connected” accessibility increases.

Business Continuity

Maintaining a consistent level of IT service availability across a global business is now mandatory. Any drop in operational performance can have a serious impact on corporate reputation, share value and ability to compete in an aggressive marketplace.



We spoke to several thousand senior executives who had moved to a converged communications platform. Almost unanimously, there were two reasons why they did so: economic value and strategic value.

Economic Value

- Pure cost savings
- Consolidated communication environment (mobile phones, voice mail boxes, etc.)
- Improved call flow management – particularly for mid-size and large companies

Strategic Value

- Increased communication capabilities for mobile employees
- Improved responsiveness to customers and colleagues
- Improved knowledge sharing between distributed people and/or locations
- Enhanced business continuity for mission-critical applications
- Improved management of customer data
- Streamlined processes for faster execution
- The ability to strengthen a Service-Oriented Architecture (SOA)
- A consistent, branded user experience

Source – Avaya May 2006

“The important dividing line will be between those who see VoIP as just a new way to do the same old things and those who use it to rethink their entire business” – Kevin Werbach, Harvard Business Review, 2005

Communications are becoming a strategic tool to drive business growth and sharpen reactions to changing market conditions. So communications infrastructures and applications shouldn't be treated as commodities to be procured at lowest cost – rather, they should be regarded as a cornerstone of your business that demands the best available solution to enhance business processes and enable you to maintain your competitive edge.

And that solution is provided by Avaya and Extreme Networks.




A Proven Global Alliance

Avaya Inc. and Extreme Networks Inc. are engaged in a multiyear, multimillion-dollar strategic alliance to jointly develop and market converged communications solutions. This alliance unifies Avaya's global market leadership in IP telephony, related applications and services for converged environments with Extreme Networks' expertise in high-performance IP data network infrastructure. Together, we provide businesses around the world with one of the broadest arrays of converged technologies and services in the industry through a single relationship.

Our philosophy is predicated on an easily administered yet feature-rich infrastructure that epitomizes the vision of open convergence. By using an open standards-based approach, we can give our customers greater choice and flexibility, extend the longevity of their technology by enabling future applications to be easily integrated and decrease Total Cost of Ownership (TCO). This is in contrast to the proprietary model for network equipment that characterizes competitors' offerings.

Our aim is to simplify the deployment and management of a converged network through the development of next-generation, standards-based technologies in the areas of management and provisioning, Quality of Service (QoS), security and network resilience that utilize advanced protocols, such as the Session Initiation Protocol (SIP). We have integrated our network management systems so customers can easily manage their solutions from either an Avaya or Extreme management system, or both.

Key intellectual property developed in Avaya's labs has been ported to the latest Extreme switches, which provide technology for measuring the real-time characteristics of the network in a converged environment. We have enhanced auto-discovery and authentication, increased security protection and created self-healing converged networks for a seamless mobility experience.

In addition to joint product development, we are also aligned at a commercial level. Avaya and its business partners sell and support solutions from Extreme Networks – including Ethernet switches, wireless and security products – as a unified point of contact, and Avaya's sales and support personnel are certified on Extreme's products.

We've aligned to create Engaged Networks for better business

Avaya's Intelligent Communications solutions are enabled and supported by Extreme's resilient networking infrastructure, allowing us to jointly offer the ultimate in reliable and secure converged technologies with a single point of accountability.

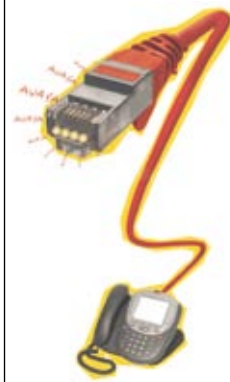
We bring a new breed of applications to those enterprises that aim to take advantage of a converged network environment. Furthermore, we can uniquely support these companies in evolving from the current practice of converging networks to a new era in which communications are ingrained in the business process. We call this the "embedded stage" – the basis of "Intelligent Communications".

Whilst many organizations are still moving towards a converged network, our strategy is to take forward-thinking businesses beyond this to an engaged network.

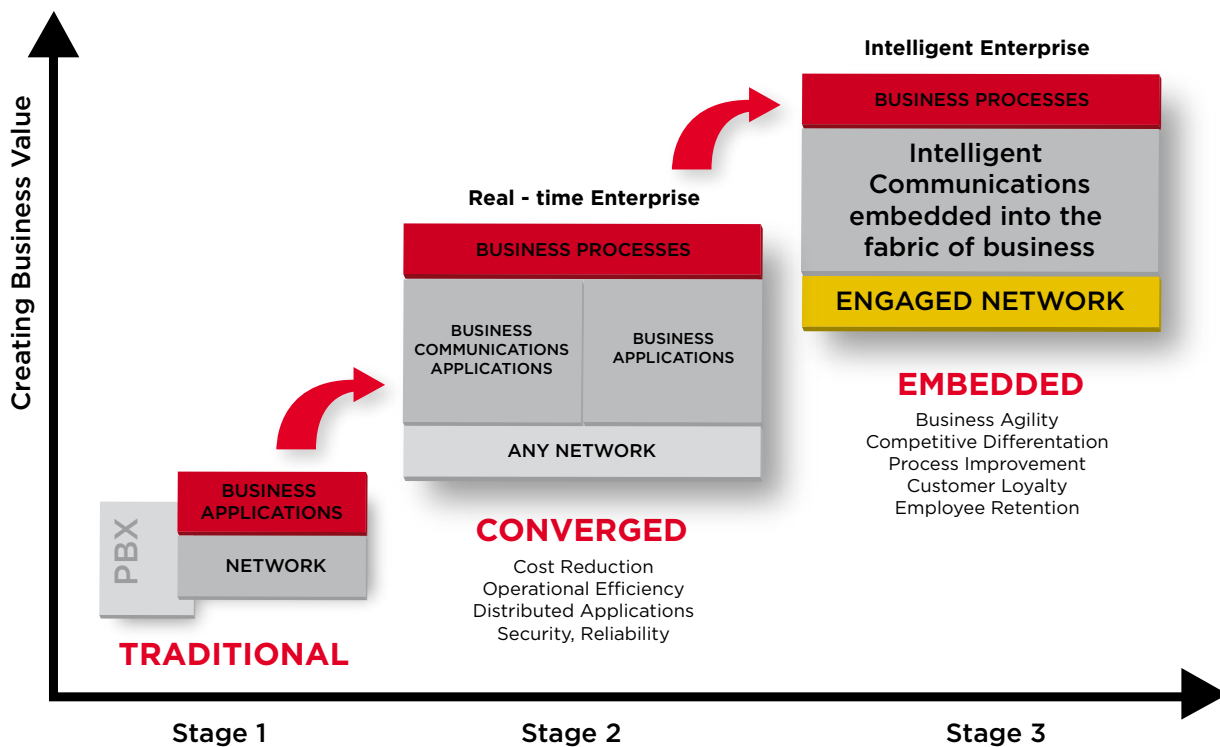
The key differentiator of an engaged network is that it is intrinsically woven into the day-to-day operations of the business.

Such networks are supported by a robust infrastructure and components which can react to situations as they arise.

We are concentrated on a shared strategy to embed communications at the heart of our customers' practices and processes which will profoundly transform their business.



The Engaged Network & Intelligent Communications Evolution



The engaged network brings together the very best Avaya voice software and Extreme's Ethernet switches and security infrastructure in one intelligent enterprise. With greater real-time visibility of the infrastructure's performance, the enterprise is better prepared to adapt to changes in the operational, commercial and competitive landscape.

Businesses are demanding more from their networks and convergence is only the beginning of the process and its potential. The engaged network is the next step forward, where the network becomes fundamental to the transactions and processes of the business.



Evolving your business from Converged to Engaged Networks		
	Converged Networks	Engaged Networks
Paradigm	Transport of voice and data over a single IP network infrastructure	Delivery of rich solutions to innovate business processes
What is it	An "IT issue"	An integral part of the business
Technology platform	An IP data and voice network that is not fully integrated	Open, standards-based technology capable of being supported by a single point
Specification you want	The solution the vendor wants you to have	The freedom to build the network you want
Future-proofing	Over-provisioning to support increased demand	Flexibility to support the unknown
Primary concerns	Availability and voice quality	Interactive reconfiguration, auto-provisioning, self-managing functionality, proactive security
Maintenance	Resource-intensive support required to provide continuity of service	Simplified management enables resource to be diverted to higher value opportunities
Success measured by	Value return – ROI / cost savings	Value creation – profitable growth and sustainable competitive advantage

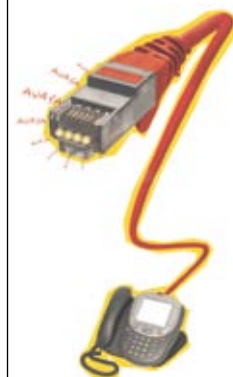
The successful exploitation of Intelligent Communications means addressing a broad array of management and operational concerns, including reliability, availability, security, serviceability, manageability and scalability. A successful engaged network doesn't just consider how well voice, data and video can be transported on an IP infrastructure; it also considers how your organization will design, install and operate this network – day in, day out.

Not all IP Telephony Networks are Created Equal

Many people believe that the key to success with IP Telephony is to bring voice services to a data network. We believe the opposite to be true. The success of IP Communications is really a function of increasing the quality, reliability and availability of the data network to meet the real-time characteristics and needs of voice communications.

This means designing and implementing a converged network that can deliver the continuous, uninterrupted availability required by delay-sensitive voice traffic. The impact of congestion can be debilitating to IP telephony calls. If voice calls have to compete with other applications for the bandwidth they need, packets can drop and communications quality can become unacceptable. New callers may even be unable to establish a dialing tone.

Most networks can handle converged applications on a “sunny day” but when unpredictable spikes occur, networks need to be able to respond by dynamically allocating bandwidth on a prioritized basis, even if that means background file transfers slowing down until the surge recedes.



Performance Under Duress – Tolly Verified

In 2005, Avaya and Extreme commissioned the Tolly Group to evaluate the ability of Extreme Networks' and Cisco Systems' core/edge LAN infrastructure to deliver voice, video and data applications in networks with varying levels of congestion.

Engineers built an edge-to-core-to-edge environment, traversed by IP Telephony (calls and set-ups), video over IP, high priority data and “background” data. The switch fabric was deliberately overloaded by increasing the background data to see how it would handle the “triple play” traffic.

Their findings revealed that Extreme Networks' switching infrastructure maintained excellent toll-quality voice, even under adverse congestion conditions. While Cisco's solutions could not protect prioritized voice/video/data and showed severe degradation under high load, Extreme's switches achieved uninterrupted dial-tone with 100% call completion across an Avaya voice network and successfully delivered 100% of video streams and high priority data.

“The message that network architects can take from the Avaya/Extreme Networks relationship is simple: It's all about consistency. Both companies have pulled together to offer high-quality voice calls at a measured rate that falls well within the “excellent” quality range for toll-quality traffic.”

To obtain a copy of the full White Paper entitled ‘The Business Implications of Implementing IP Telephony on Enterprise Networks’ (2005) from The Tolly Group, visit www.tolly.com





Who We Are, What We Do Best

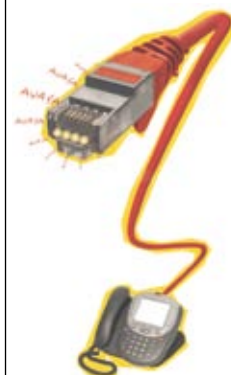
Our alliance has been expressly created for the benefit of our customers, enabling them to procure, install and support engaged network infrastructures for Intelligent Communications solutions from one source.

Avaya's worldwide services organization – Avaya Global Services – provides customers with a single point of accountability for managing multi-vendor networks and supports Avaya and Extreme customers with network assessment and optimization, security and business continuity planning, deployment, training, technical support, maintenance and managed services.

Together, Avaya and Extreme deliver:

- **High Quality Voice** – IP Telephony with superior Quality of Service (QoS), evidenced by the Tolly Group, August 2005
- **High Availability** – Avaya's redundancy features combined with Extreme Networks' switches with hardened, modular Operating System (OS) and redundant hardware prevent dropped calls
- **Lower Cost / Faster ROI** – verified by the Meritology Report, October 2005
- **Lower Risk** – open, standards-based solution with certified interoperability
- **Single point of Accountability** – Avaya provides sales, service and support
- **Ease of Management** – solutions integrated with both Avaya's and Extreme's network management systems
- **Enhanced Capabilities** – focused on simplifying overall IP network and telephony management, QOS monitoring, telephony and other endpoint device discovery services and enhanced security

Solutions comprised of Avaya's and Extreme Networks' products allow customers to focus on managing their businesses rather than their networks.



Avaya Inc.

We are a global leader in communication systems, applications and services. We design, build, deploy and manage networks for customers ranging from small businesses and nonprofit agencies to more than 90% of the FORTUNE 500 companies. They all depend on us for reliable, secure networks that facilitate business relationships, enhance productivity and maximize profitability. We employ approximately 20,000 people, including some 2,500 research and development professionals worldwide. We have around 2,500 authorized or certified business partners worldwide.

Our unique combination of applications, systems and services help simplify complex communications and work with existing technologies from other vendors, enabling customers to unlock value and potential from their network. By embedding communications into the very business processes of an enterprise, we help to improve the way organizations work – making people more productive, processes more intelligent and customers more satisfied.

Key Facts

Avaya is consistently recognized as a global leader by industry and technology experts:

- No. 1 in Worldwide Enterprise Telephony
- No. 1 in Worldwide IP Telephony
- No. 1 in Worldwide Call Centers
- No. 1 in Worldwide Unified Communications
- No. 1 in U.S. CPE Maintenance Services
- No. 2 in IP Telephony in Europe, Middle East and Africa

We have been placed in the 'Leaders' Quadrant in the following Gartner Group "Magic Quadrants":

- Telephony Magic Quadrant for North America
- Telephony Magic Quadrant for Europe, Middle East and Africa
- Contact Center Infrastructure Magic Quadrant for North America

Avaya Global Services

Avaya Global Services provides expertise, experience and methodologies to take businesses to Intelligent Communications. Professional Services from Avaya are focused on helping IT and business managers identify business processes that can be communication enabled. We help businesses develop technology and IT architecture roadmaps to support the transformation of applications while mitigating risks, leveraging existing investments, and maximizing potential benefits.

Our global consultants are thoroughly skilled in all forms of communications transport, including voice, data, wireless, video and IP Telephony. As well as technical expertise, they have extensive business acumen, amassed over years of exposure to all aspects of enterprise management. Together, they are committed to helping Avaya and Extreme customers manage their communications technologies, from sales to customer service, from front-end applications to back-end processing.




Extreme Networks, Inc.

We design, build and install sophisticated Ethernet solutions that meet the toughest challenges in network connectivity and IP-based communications. Since our founding in 1996, we have delivered more than 15 million Ethernet ports, helping our customers to increase the value of their networks with advanced software platforms that deliver meaningful insight and control to applications and services. This helps corporate enterprises and service providers who need high performance through secure networks that support converged voice, video and data.

We address a wide range of customers with wired and wireless network infrastructures from corporate enterprises such as manufacturers, retailers, financial institutions, utilities and healthcare organizations, to large universities and federal and local governments.

Headquartered in Santa Clara, California, we have a presence in more than 50 countries supported by 850 employees and 700 authorized partners worldwide.

We believe single-vendor limitations are not in the best interests of today's enterprises, favoring instead an innovative networking infrastructure which is modular, open and standards-based. Our networks are designed to be simpler to build and less expensive to maintain, while addressing all of the primary infrastructure concerns posed by emerging applications.

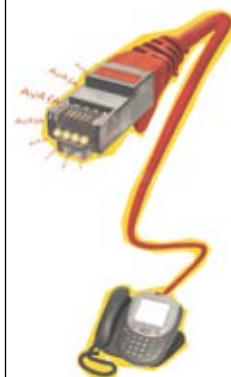
"Extreme Networks is a visionary and one of the true innovators that will change the rules of the game" (Network Magazine, 2005)

FROST & SULLIVAN

In 2005, Frost & Sullivan, a leading IT industry analyst, awarded us their Product Line Strategy Award for enterprise networking.

NetworkMagazine

Network Magazine has also honored our BlackDiamond® 10808 switch and the ExtremeXOS™ operating system by recognizing it with the 2005 Innovation Award for its unique approach to opening the core switch for collaboration to promote integration with third-party solutions. The solution was named the "Most Visionary" for its ability to increase intelligence and device collaboration for emerging areas such as security and IP telephony.



Combined Strength, Total Customer Focus

Our commitment to protecting your investment in network infrastructure and applications is emblematic of the one constant throughout our business: total customer focus.

Everything we do is in response to our customers' needs, or measured against customer needs before execution – whether it's a product enhancement, a new service offering or a major organizational change. Through our million-plus customer relationships, we have an excellent grasp of those needs: reducing costs, improving customer service, increasing productivity, lowering risk and growing revenue.

Avaya's alliance with Extreme illustrates our shared commitment to providing solutions that address the current demands of IT decision-makers as they migrate their organizations towards converged communications. Major wins in the US, Europe, Asia and South America in verticals including finance, retail, hospitality, education and government, have demonstrated the value of this alliance.

How our Global Alliance is meeting the needs of enterprises like yours

We are accelerating the evolution of secure Intelligent Communications by:

- combining Avaya's business communication applications with Extreme's VoIP-aware engaged networks
- delivering market-leading security, intrusion detection and threat mitigation
- basing our innovation on flexible, open standards-based architecture
- lowering total cost of ownership for our customers

We are assuring the high availability of distributed communications with:

- scalable performance backed by pervasive security and mission-critical reliability
- comprehensive network optimization to increase application availability
- voice-enabled networks specifically designed to handle VoIP traffic processing
- "always on" architecture with built-in redundancy and failover mechanisms

By providing a single point of contact, we:

- resell Extreme's products through Avaya's trained worldwide sales channels
- provide global support by Avaya Global Services
- have a comprehensive strategic alliance which encompasses sales, joint marketing and product development

In summary, our powerful alliance delivers advanced converged networking solutions and services not available anywhere else in the market.

AVAYA



Always on, totally secure, easy to deploy

A unified solution without single-vendor lock-in or single-vendor compromises

Unlike vendors who deliver proprietary solutions, our philosophy towards open standards offers you greater choice and flexibility in extending your network capabilities. We are dedicated to an open networking approach that actively employs your network as part of your critical business processes. This is more than simple standards compliance – our networks are fully engaged with advanced applications for greater flexibility and extraordinary performance under duress.

Our combined portfolio, our joint expertise



Extreme Networks Solutions

- Modular Ethernet Switches (Core and Edge)
- Fixed Configuration Stackable Switches
- LAN Security Products
- Wireless Products
- Network Management



Avaya Solutions

- Communication Manager Software
- Media Call Processing Servers
- Media Gateways
- Contact Centre Solutions
- IP, Digital, Analog Phones
- Network Management
- Avaya Global Services

Our vision for integrating applications with network infrastructure

Through our joint alliance, our respective engineering teams have collaborated to design solutions that combine Avaya's world-class communications applications with Extreme Networks high-availability, high-quality Ethernet switches and security infrastructure. Our joint development activities are focused in the following principal areas:

- Integrated network and IP Telephony management
- Real-time network monitoring and proactive testing
- Discovery and authentication services
- Plug-and-play deployment
- Integration of applications and network infrastructure to create the "applications aware" network

Avaya's Solutions

Our portfolio includes applications and infrastructure to support the communications needs of forward-looking businesses, including IP telephony, contact centers, mobility, collaboration and messaging.

Media Servers & Gateways

High availability starts with reliable servers, securely running world class software. We offer media servers for every enterprise or branch location, including our scalable Definity® servers, which protect your investment by allowing your enterprise to grow without changing your entire communications system. Communication networks connect across the globe through media gateways of every size; from the smallest G150 for small branch offices to the G650 and G700 for the largest enterprises.

IP Phones & Softphones

Our one-X™ family of next-generation IP telephones is designed to drive increased employee productivity, while our IP Softphone software turns a laptop computer or handheld device into a virtual office phone for use with a headset, cellular phone or wired phone.

MultiVantage Applications

Our MultiVantage™ enterprise communication applications are designed to serve multiple locations by extending the headquarters' capabilities throughout the organization, providing seamless communications while reducing overall management costs.

Communication Manager Software

Our next generation call processing software, Communication Manager, is an open, scalable and highly reliable telephony solution which can accommodate as many as 36,000 users on a single system and more than one million users on a single network.

Assured Network Tools

Our Converged Network Analyzer (CNA) creates a WAN network infrastructure that is self-healing and self-optimizing, to maximize the availability of applications while reducing IP WAN costs.

Avaya Global Services

Our IP telephony and communications applications and Extreme's Ethernet networks are jointly supported by Avaya Global Services, with 9,000 services experts worldwide, 37 network operations and technical support centers and unique patented design and management tools.



AVAYA

Extreme's Solutions

Our innovative network architecture provides enterprises with the resiliency, adaptability and simplicity required for a true converged network that supports voice, video and data over wired and wireless infrastructures, while delivering high-performance and advanced security features.

Ethernet Switching

Our comprehensive set of Ethernet switching products for enterprises and service providers includes everything from BlackDiamond® and Alpine® modular switches to Summit® fixed configuration switches that deliver gigabit capability to the desktop, power over Ethernet and the latest advanced networking features. The BlackDiamond and Alpine switches are designed to minimize latency and jitter, which degrade the quality of voice and video applications. The Summit fixed configuration switches deliver affordable high-performance multi-layer Ethernet switching to wiring-closets, aggregation points and the network edge.

Security Solutions

Our advanced security resources can address your most challenging network security projects. From Sentriant™ that provides day-zero attack mitigation, Sentriant AG that ensures secure network access management, Sentriant CE150 that delivers network encryption services, to our Ethernet switches that offer a variety of built-in security capabilities, Extreme engages the network to deliver pervasive security coverage.

Wireless Mobility

To help you solve your mobility challenges, we offer a voice-grade Summit WM® wireless LAN solution. This solution was designed to provide a quality voice and data connection over the wireless LAN.

Innovative Software

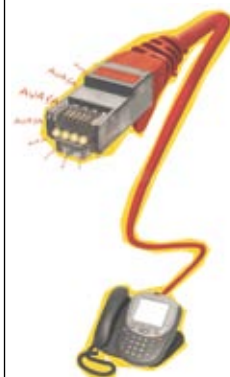
Our operating and management software solutions are built to support sophisticated, converged networks. ExtremeXOS™ is a modular, open network operating system that delivers meaningful insight and unprecedented control for mission-critical applications. EPICenter® provides all fault, configuration, accounting, performance and security functions to manage our multi-layer switching equipment.

Support Services

Extreme offers comprehensive voice and security assessments as well as maintenance and support services that will provide your network with optimized converged network performance.

In a complex networking environment where you deal with converged applications, multiple user groups, multiple device types and regulatory mandates for security, Extreme Networks gives you the ability to obtain meaningful insight into your network and gain unprecedented control over network activities.

How our Engaged Network responds to your challenges



High Availability, Reliability & Quality Network Infrastructure

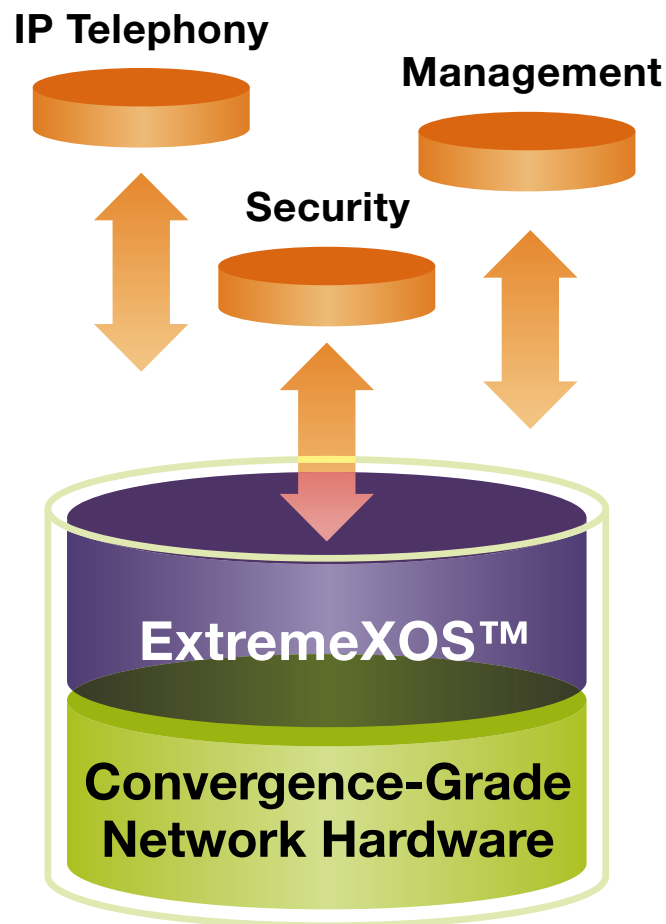
Your Challenge	Our Response	Value Created
<p>Network reliability is about money – quantifying the potential impact of downtime on your business.</p> <p>It's therefore vital to implement the tools and systems needed to ensure maximum network availability.</p>	<p>ExtremeXOS delivers meaningful insight and unprecedented control for mission-critical applications.</p> <p>Local Survivable Processors (LSPs) embed call processing features in branch office gateways that automatically kick in if connectivity to centralized resources is lost.</p> <p>Enterprise Survivable Server (ESS) solutions can take over some or all of the enterprise in the event of an outage.</p> <p>The Ethernet Automatic Protection Switching (EAPS) supports a failover rate of less than 50 milliseconds.</p> <p>With fine granularity Quality of Service (QoS) control, Extreme switches ensures bandwidth to priority-tagged packets.</p>	<p>Your network is “always on” and able to gracefully adjust to changing conditions of the network, ranging from increasing traffic loads to WAN outages, while continuing to provide performance under duress without impacting call quality or voice service availability.</p>

AVAYA



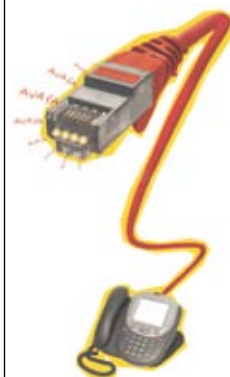
In a test conducted by the Tolly Group (2005), engineers found that the Extreme Networks BlackDiamond switches delivered excellent quality voice consistently across four test scenarios with varying degrees of background traffic contending for bandwidth, with a Perceptual Quality Speech Measurement (PSQM) of 0.4, well within the 1.5 PSQM toll-quality threshold. This is considered excellent voice quality.

By contrast, the Cisco Catalyst switches tested exhibited difficulty delivering toll-quality voice as background traffic levels increased, with both switches achieving fair to poor voice quality under heavy traffic load conditions.



ExtremeXOS, the first modular Network Operating System for Enterprises, offers enhanced availability by isolating critical functions. And by offering extensibility through on-switch software modules, ExtremeXOS delivers choice and a future-ready platform.

Extreme maintains excellent toll-quality voice, even under adverse congestion conditions



Simplified Integrated Management		
Your Challenge	Our Response	Value Created
<p>What can you determine about your network at a glance? What's up and what's down? How is everything configured?</p> <p>As the number and type of devices in a LAN increase, it can become difficult to monitor and configure each device or find and rectify problems.</p> <p>Integrated Management is the first step towards operational simplicity.</p>	<p>Extreme Networks' EPICenter management suite allows you to configure, monitor, troubleshoot and manage your IP-based network.</p> <p>Avaya Integrated Management (AIM) simplifies application administration, provisioning, network management, alarming and monitoring.</p> <p>The Universal Port feature supports secure auto-configuration, provides inventory information and enables fine granularity to manage ports, QoS settings and VLAN segregation.</p> <p>We provide support for the Link Layer Discovery Protocol (LLDP) in our products and are jointly developing applications to use LLDP information to better manage and deploy IP telephony and infrastructure components onto networks. The network discovers devices using LLDP and provisions services such as voice, video, data or enterprise application access as soon as a user connects to the network.</p>	<p>By decreasing the time required to execute deployment, operational and administrative tasks, more time can be devoted to proactively generating future savings in reduced downtime, improved equipment and network longevity and the ability to quickly deploy new applications.</p>

Streamlined Installations and Simplified Management

- Avaya Intelligent Management and Extreme Networks' EPICenter
- Integrated Network Management
- Discovery and management of Avaya and Extreme Networks' devices from a single platform

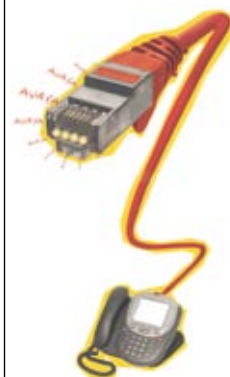


Solutions comprised of Avaya's and Extreme Networks' products allow customers to focus on managing their businesses rather than their networks.

Enhanced Security		
Your Challenge	Our Response	Value Created
<p>Network security accounts for an increasing proportion of a typical organization's IT budget.</p> <p>High profile denial of service (DOS) attacks such as worms and viruses can cripple a network.</p> <p>Rapid detection and mitigation of day-zero security threats is required to maintain network availability.</p>	<p>Extreme's open security framework with Virtualized Security Resources provides network wide coverage for data protection, threat mitigation and network access management.</p> <p>Sentriant™, Sentriant AG, and Sentriant CE150 ensure network-wide coverage for the toughest security challenges.</p> <p>Multiple 802.1x Supplicant Support uniquely recognizes and applies the appropriate policies for each specific user or device on a shared port.</p> <p>Secure login/authentication via 801.1x, MAC and Web Login is supported on all switches from Extreme Networks.</p>	<p>We are evolving network security from a reactive "seek and destroy" model to a proactive, policy-driven model.</p>

Pervasive Security Coverage

- An open, engaged approach to network-wide security
- Utilization of on embedded switch and virtualized security resources
- Comprehensive coverage for both IP Telephony and data applications



Network-wide Insight & Control		
Your Challenge	Our Response	Value Created
<p>IP Telephony networks need to be monitored in real-time due to the critical need for voice to be dial tone reliable, with any degradation in connection quality corrected proactively.</p>	<p>Our Converged Network Analyzer (CNA) uses a decision-making engine to compare real-time data against business policies and take specific avoidance or corrective action. CNA test agents are embedded in Avaya IP phones and media gateways and in Extreme's switches.</p>	<p>CNA makes all IP-based applications highly available and predictable by creating a network infrastructure that is self-healing and self-optimizing.</p>

The Power of Insight

Our monitoring capabilities deliver unprecedented insight and control over network operations. The result is an engaged network that works in tandem with third-party resources, applications and operational services to deliver a better platform on which to accomplish your business objectives.

By insight, we mean an open network that can give applications and solutions detailed, real-time visibility into networked business activities. Insight gives you visibility into possible security breaches or abnormal behavior on the network. Insight provides a clear picture of real-time, network-wide voice performance.

For example, once a problem has been detected, the network is automatically programmed to stop traffic, slow it down, divert it or quarantine it – to take a variety of different control actions that deliver a powerful and innovative approach to network management.

In short, meaningful insight enables you to run your business more smoothly.



Value Creation & Total Cost of Ownership		
Your Challenge	Our Response	Value Created
<p>It is vital to consider the long term Total Cost of Ownership (TCO) when investing in network infrastructure.</p> <p>But it is no longer enough to simply manage costs – the network must be able to create growth opportunities and enable better ways of doing business.</p>	<p>Our significant TCO advantage is obtained through lower hardware costs, lower maintenance costs and reduced upgrade costs due to ease of expansion.</p> <p>Our networks are proven to deliver:</p> <ul style="list-style-type: none"> • 29% lower TCO over comparable Cisco two-tier networks • 40% lower TCO over comparable Cisco three-tier networks • 36% lower expected upgrade costs than Cisco 	<p>Our engaged networks offer unprecedented business agility and transparency through the virtualization of information resources, unified control, faster deployment of services and innovative new business processes</p>

TCO is defined as all the direct costs associated with purchasing, installing and running a network. TCO's primary cost drivers, in order of significance, are:

- network performance capability – i.e. access port bandwidth combined with uplink bandwidth, which drives the cost of the hardware
- configurability and flexibility – i.e. fixed configuration switches vs chassis switches, which drives the access layer hardware cost and complexity
- quantity, complexity and variety of switches, which drive service, installation and personnel costs
- quantity and bandwidth of uplinks to the core which drive core hardware costs

Reducing the Total Cost of Ownership - The Meritology Report

The findings from the 2005 white paper on Total Cost of Ownership by Meritology Labs demonstrated that Extreme's two-tier networks have a significant TCO advantage over competitive offerings. In this study, TCO was measured over a 3 year investment horizon, with 396 reference configurations chosen from both Extreme and Cisco to yield comparable overall network performance.

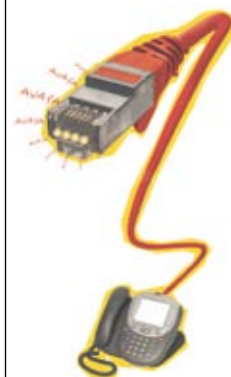
The Meritology model of TCO included hardware, expected upgrades, implementation (design, configuration, installation), service, training and personnel (network support staff). The primary metric used was "TCO per port", i.e. the total cost of ownership divided by the total number of access ports, to enable comparison across different network sizes and topologies.

Extreme's two-tier network was found to have a 29% weighted average advantage over a comparable Cisco two-tier topology and 40% weighted average advantage over Cisco's traditional three-tier alternatives with comparable performance.

Extreme's TCO advantage derives primarily from lower hardware costs, lower personnel costs and lower expected upgrade costs due to innate ease of expansion, assessed by Meritology as 36% less on average than Cisco configurations, which face a higher likelihood of needing to upgrade major components or move to a different platform.

By combining the value return offered by Extreme Networks with the opportunity to fundamentally change the way a business operates and reacts in real-time to the changing business environment by leveraging both Intelligent Communications and the Engaged Network, CIOs can create new opportunities for growth. Our joint commitment to open standards offers you the flexibility to take your network and communications infrastructure in new and exciting directions in the future and also enables you to make those investments at your own pace and in response to your unique business needs.

To view the White Paper from Meritology on Total Cost of Ownership in its entirety, please visit www.extremenetworks.com



AVAYA

Don't just take our word for it

This section demonstrates the power of the Avaya & Extreme Networks' Alliance in delivering innovative solutions to customers seeking a single converged voice and data network.

As you will see from the examples that follow, most of our customers had very specific constraints or requirements. Many were moving or growing. Some had an existing LAN while others were Greenfield projects. Some wanted to add advanced functionality such as wireless capability to their network. Several, as you would expect, had limited budgets.

What they all had in common was a desire to deploy a cost-effective, robust, secure and future-proofed converged network which would be easy to manage and provide tangible benefit to their day-to-day operations.

For the full story behind each of these successes, visit www.avaya.com/extreme

World Class Football Meets World Class Communications

Germany hosted the 18th FIFA World Cup™ in the summer of 2006. Play opened on June 9th and over the next 31 days that followed, a total of more than 3 million live spectators and a global viewing audience of billions witnessed the competition. Avaya, a leading global provider of business communication applications, systems and services, was the official partner at the World Cup. Together, Avaya and Extreme Networks® built and managed the open converged communication network infrastructure that supported the FIFA World Cup. The converged communication network for the 2006 FIFA World Cup carried over 20 trillion bytes of voice and data. This converged network, which combined voice and data, managed the flow of information for 12 host stadiums, 32 competing teams, 14 accreditation centers and 15,000 journalists. The overall network availability mandated 99.999% reliability; these demands placed on the FIFA World Cup network – would rival some of the largest multi-national corporations.

Nothing Short of a Perfect Score Would Do

The challenge that Avaya faced was to provide an effective, efficient and secure mode of communication around-the-clock to more than 15,000 on-the-move FIFA officials and key FIFA World Cup stakeholders. The communication applications and IP telephony solution that Avaya managed was to be used in a highly visible environment that would rapidly change. For FIFA, it was critical that the network worked without any downtime – nothing short of an ultra reliable, fully integrated network with world class performance would do.

Transparency:

For a highly visible event such as the FIFA World Cup, it was critical to deliver a transparent network that gave each FIFA stakeholder group the capabilities they needed all the while removing all the behind the scenes complexity.

Multiple Locations:

Although games were to take place in twelve stadiums across Germany, the actual FIFA World Cup network was far larger with over 70 locations connected including on-site offices, VIP areas, media centers, airports, train stations, mission-critical accreditation centers, and FIFA headquarters.

Managing Constant Changes:

It was necessary to be able to make quick modifications to network devices and connections, at times Avaya needed to be able to adjust technical variables that required changes right up to the start of the match time.

Interoperability:

Interoperability was a must, the entire IP telephony solution needed to work well with Extreme Networks' hardware and associated software as well as other vendors that supplied equipment.

Network Applications:

The network was meant to be able to issue accreditations for players and journalists, report results, track materials and inventory, confirm accommodations at FIFA's official hotels, and maintain security systems. One of the unique applications on the network ensured real time verification and updates on ticket status. With the Avaya network in place, real-time scores allowed fans, media and stakeholders to instantly know who scored and who won the match.

Extreme Networks worked with Avaya to ensure that the FIFA World Cup Germany 2006™ network ran smoothly. The commitment to this event involved Extreme for over a year in the planning and construction of the network. The equipment was set-up and tested in the Avaya FIFA test lab in Frankfurt, before being re-built in the appropriate stadiums.

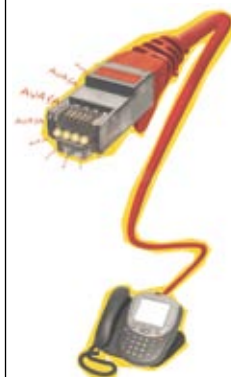
Game Winning Solution

The network architecture consisted of 29 BlackDiamond® 8810 core switches from Extreme Networks, which supported the Avaya 4600 series IP telephones. These core switches delivered 10 Gigabit Ethernet links across sites, into servers and across Avaya's IP telephony gateways. While providing a variety of access options, including Gigabit Ethernet to the desktop, wireless and high density POE supported Avaya's IP phone to operate in any location.

Two switches were located in each stadium to deliver voice-class availability even under adverse conditions. Aggregated high-speed connections eliminated bottlenecks between the edge and the core to reduce management needs, operational complexity and capital expenditures.

"The combined infrastructure delivered a truly world class approach to open converged networking, eliminating the boundaries of communication any time, any place. Wireless voice and data was available in the stands, enabling journalist to send stories directly to their editors or upload them to websites in real time", said Martin van Schooten, Sr. Director World Wide Field Marketing, Extreme Networks. "This was one of the most significant changes enabled by the network."

As part of the global strategic alliance, Avaya and Extreme Networks jointly developed tools such as the Converged Network Analyzer (CNA) a key component of this network. It guaranteed the SLAs to be set in place around availability, resiliency and security. This intelligent tool monitors the converged network infrastructure to identify and examine individual devices which are connected. It also surveys the network topology and controls the flow of traffic across the network. It was designed to reroute traffic where required and has the capability to act to address simple issues without an engineer on hand to simplify and reduce network management tasks. In addition to the CNA, Extreme Networks provided support through their Premier Services Program (PSP), an advanced network monitoring and performance management tool. The Program is a collection of management and visibility tools that address multivendor network environments.



AVAYA**extreme**
networks

PSP helped Avaya manage and monitor the FIFA World Cup network across 70 locations, supporting as many as 45,000 network connections across 12 separate stadiums and dedicated media centres.

“Extreme Networks’ PSP provided the FIFA World Cup Germany™ network with the comprehensive visibility and proactive centralised management that easily scaled the world’s largest sporting event converged voice and data network”, stated Suresh Gopalakrishnan, Vice President Marketing, Extreme Networks. “Working with Avaya, we were please to assist with the delivery and performance management of this world class network.”

Excellent Performance Equals Smooth Operations

By integrating Extreme Networks’ resilient and scalable campus architecture with Avaya’s high-performance IP telephony and communication applications, the 2006 FIFA World Cup communication was smooth and uninterrupted.

In a very real way, the network’s excellent performance contributed to the success of the event. The global audience was able to watch matches in real-time, network performance was maximised and costs were minimised. Mission-critical applications were in place and information was safeguarded from intrusion. “This is one of the largest and most sophisticated networks ever built”, stated Doug Gardner, FIFA World Cup Program Managing Director, Avaya. “Our commitments to open standards enabled us to manage this best-of-bread network as one single entity and maximise the availability of applications. For us and FIFA, the Avaya and Extreme ethos was to deliver reliable and comprehensive access across all devices and locations.”

According to Avaya, a total of 21.126 terabytes of voice and data traffic was transferred over the network between May 15, when the network became operational, and July 10. During this time people logged on to the converged communication network approximately 642,538 times, made 364,395 phone calls which equaled nearly 800,000 minutes of calling time. Astounding amounts of voice and data traffic was handled over the network that Avaya built for FIFA and it achieved 99.999% availability without a single major outage and was free of errors.



Avaya Hospitality Communications Solution Makes Wynn Las Vegas Guests Big Time Winners

Challenge:

With a focus on creating the ultimate visitor experience at their resort, Wynn Las Vegas wanted a hospitality communications solution that would set a new standard for their guests' enjoyment and convenience, and help distinguish Wynn from their competitors.

Solution:

Avaya and Extreme provided the hardware and Intelligent Communications solution to support data and IP Telephony-based applications which would be transparent and intuitive for use by guests and staff alike. Guests can use their phone as an information kiosk, linking them to Wynn's 22 restaurants, multiple entertainment venues and 10,000 Wynn staff in different departments.

Value Created:

Elegant phone hardware underpins the branded experience, coupled with intelligent interactions with customers and faster linkage of people, processes and resources.

"One of the very best IT solutions the company has ever deployed" - T.Y. Lin

Challenge:

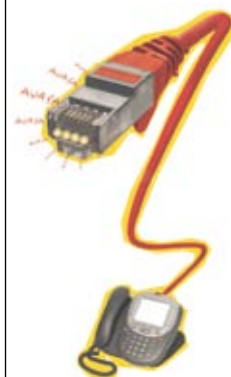
To implement an IP telephony-based solution and centralized voice messaging for T.Y. Lin International, a civil and structural engineering firm, to reduce costs and connect their offices with a reliable, secure network.

Solution:

A range of applications and services including Avaya Communications Manager, media gateways, IP telephone hardware and voice messaging services.

Value Created:

T.Y. Lin has already seen a reduction in long distance charges between offices, as well as increased productivity and mobility. Everyone is always in touch, making them more competitive and easier to do business with.





Sea Change International Selects Innovative Voice over IP Solution from Extreme Networks and Avaya

Challenge:

To provide Sea Change International, a developer and marketer of video storage servers, with a new VoIP solution offering the same quality and reliability as their existing circuit-switched voice network on a scalable platform.

Solution:

Avaya's comprehensive Enterprise Class IP Solutions (ECLIPS) supported Sea Change's business-critical applications, while Extreme's open application infrastructure leveraged powerful switching and QoS capabilities for effective management of VOIP traffic.

Value Created:

Sea Change is enjoying notably improved network performance and significant savings, while being well prepared for future growth and the addition of new technologies.

San Francisco Museum of Modern Art Merges Art and Technology with a Wireless Network from Extreme Networks

Challenge:

To integrate wireless connectivity into the existing network of the San Francisco Museum of Modern Art (SFMOMA), while meeting the budgetary needs of a private, nonprofit organization.

Solution:

Today, the Museum can offer visitors Wi-Fi access in several areas of the museum and has plans to engage visitors with wireless PDAs, giving them the ability to walk around galleries and link to information about the exhibits.

Value Created:

The entire Extreme Networks platform shares a consistent hardware, software and management architecture, creating management simplicity while reducing network ownership costs.

Pecos Independent School District partners with Extreme Networks to Bring Cutting Edge Technology to Rural Students

Challenge:

The Pecos Independent School District, New Mexico, needed to deploy a more robust, reliable network infrastructure capable of supporting advanced applications such as voice, video broadcast, surveillance, video conferencing and wireless for its students, without the costs typically associated with a high-performance, high-bandwidth network.

Solution:

Extreme's consistent, simplified platform was easy to manage on an ongoing basis and allowed the District to get the network online quickly with minimal training.

Value Created:

Extreme's open infrastructure and commitment to industry standards helped the new solution work with the District's existing infrastructure, allowing them to take advantage of Extreme's performance improvements while leveraging its existing equipment investments.

Warren Consolidated Schools replaces its district-wide network - and achieves Extreme results

Challenge:

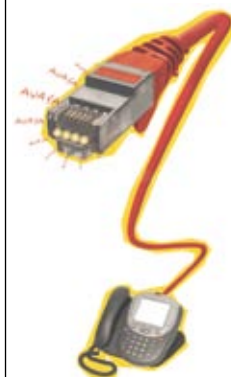
Warren Consolidated Schools (WCS), Michigan, needed to replace its aging hubs with a new high performance network capable of handling the bandwidth and applications needed to deliver cutting-edge educational tools.

Solution:

The Avaya and Extreme Networks' solution delivered a simplified approach to network management and superlative QoS, enabling WCS to offer distance learning opportunities by pushing full motion video over the network without affecting the performance of other applications.

Value Created:

WCS are enjoying cost savings of over \$400,000 a year through their new VoIP solution, with the added benefit of more voice features and improved communications.





Borough of Charnwood's E-Government Initiative relies on Extreme Networks to change the way services are delivered

Challenge:

As part of Charnwood Borough Council's dedication to meeting central E-government targets, they determined they needed to upgrade their existing telephone system to better meet their citizens' needs, which meant ensuring that the network infrastructure could support the advanced calling features they were seeking.

Solution:

Extreme and Avaya's converged solution enables incoming and outbound calls to be managed according to business rules and eliminates abandoned calls, while the policy-based QoS guarantees network availability for voice traffic during times of network congestion.

Value Created:

The new IP Contact Centre has significantly improved productivity and suggests an estimated annual maintenance and support saving of as much as £20,000, while intelligent call routing means the citizen genuinely feels the Council understands his needs and is able to deal with his concerns quickly, efficiently and consistently.

What our combined technical capability means for your network

Together, Avaya and Extreme Networks offer you the flexibility to migrate to Intelligent Communications solutions and engaged network infrastructures at your own pace with unparalleled choice. This allows you to build the network you want, at the time you need, with the features and capabilities you require.

In addition, our joint investments add value beyond that offered by any other single vendor solution:

- Protect your investment with a solution that builds on your existing infrastructure
- Gain maximum interoperability with Avaya and Extreme open standards-based products that have undergone rigorous interoperability testing
- Experience unparalleled Quality of Service, "five nines" reliability and complete security
- Simplify network management with a common suite of management tools that work across both voice and data components
- Be supported by Avaya Global Services with one-stop service offerings from planning and design to implementation and maintenance

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About Avaya

Avaya enables businesses to achieve superior results by designing, building and managing their communications infrastructure and solutions. For over one million businesses worldwide, including more than 90 percent of the FORTUNE 500®, Avaya embedded solutions help businesses enhance value, improve productivity and create competitive advantage by allowing people to be more productive and create more intelligent processes that satisfy customers.

For businesses large and small, Avaya is a world leader in secure, reliable IP telephony systems, communications applications and full life-cycle services. Driving the convergence of embedded voice and data communications with business applications, Avaya is distinguished by its combination of comprehensive, world-class products and services. Avaya helps customers across the globe leverage existing and new networks to achieve superior business results.

AVAYA

COMMUNICATIONS
AT THE HEART OF BUSINESS

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