



IP Telephony

Contact Centers

Mobility

Services

CASE STUDY

Avaya Global Services – Helping Sentara Healthcare Deliver the Best in Comprehensive and Innovative Patient Care

Challenge	Solution
<p>Given the importance of a peak-performing network to Sentara’s core business, choosing a communications partner was truly a strategic decision. Its choice was driven by four ‘must-haves’ that were non-negotiable: the highest reliability technology, the most robust applications, the deepest experience and expertise in communications support, and a partner who took its business as serious as Sentara did.</p>	<p>Sentara Healthcare enlisted Avaya Global Services as its strategic support partner and made the decision to standardize on an Avaya communications infrastructure. Currently, Sentara Healthcare has 33 IP Telephony-enabled Avaya DEFINITY® Communications Servers, seven fully networked Avaya INTUITY™ AUDIX® Voice Messaging Systems and two Avaya Call Management Systems that power its multiple high-volume call centers.</p>
Value Created	
<ul style="list-style-type: none"> • Protects Sentara’s investment by providing the ability to upgrade and IP-enable each of its DEFINITY Communications Servers with minimum financial outlay, as well as allowing the reuse of its existing terminal equipment at approximately 15,000 stations. • Significantly decreased transport expenses by removing unneeded voice circuits. As Sentara continues its conversion to IP trunking, and moves all of its internal voice traffic to a Wide Area Network (WAN), the savings will continue to grow. • Increased staff productivity by using the Avaya Technical Support Hotline, which provides Sentara direct access to Avaya’s top engineers. • Lowered costs of IT administration and message storage through the use of IP standards like Q.SIG, which will enable Sentara to utilize advanced applications like a company-wide LDAP directory. • 24/7 maintenance support and Avaya EXPERT SystemSM Diagnostic Tools – an ‘always-on’ voice network at all sites assures Sentara that one of its most critical business technologies is always operational. 	

NORFOLK, Virginia USA – Take a close look at any market leader and you are likely to see a company with an extremely clear sense of purpose. This is certainly the case with Sentara Healthcare. Since opening its first hospital over a century ago, Sentara has held true to its singular mission of providing progressive and comprehensive community-based medical care.

With seven major hospitals and more than 60 medical facilities that coordinate every aspect of health care and wellness — from providing neighborhood primary care clinics and extended stay centers, to offering a complete line of health insurance coverage — Sentara Healthcare has emerged as a national leader in the delivery of fully integrated medical care.

Serving more than two million residents of Virginia and North Carolina, Sentara Healthcare has earned a reputation for providing programs of treatment that are highly innovative and backed by world-class technology. Selected as a premier cardiac care provider by U.S. News & World Report, Sentara was also the first healthcare system in the nation to implement a fully electronic intensive care unit (eICU), which significantly increases patient recovery rates and reduces total hospitalization time.

Sentara’s leadership in the delivery of comprehensive medical care has earned them some high-profile kudos — out of more than 500 medical networks, Sentara Healthcare has consistently been rated as one of the nation’s top two integrated healthcare providers by Verispan, an independent industry research firm.

An Absolute Reliance on Communications Technology

Sentara’s use of advanced technology is highly visible in all aspects of its operation; a fact that has earned them the distinction of being named one of America’s *most wired* health care systems by the *American Hospital Association*.

Although many of these computing and communications technologies extend well beyond the surgical suite, they remain critical to the successful delivery of medical care. As Sentara’s director of communication technologies, Debra Naderhoff knows the importance of communications in a healthcare environment.

“Our most fundamental responsibility is the care and safety of patients and Sentara’s voice communications network plays an absolutely vital role in fulfilling that mandate.

This is an environment where a failure of our communications network can have immediate, life-impacting consequences.”

“As a result, we have zero tolerance for any performance problems. Our requirements are crystal clear — Sentara’s communications network must always operate at the highest possible levels of reliability and availability. End of story.”

Choosing the Right Partner

To achieve the flawless network performance that the business demanded, Sentara saw its choice of communications provider as a critical one.

“Given the importance of a peak-performing network to Sentara’s core business, choosing our voice communications partner was really a strategic decision. At the most fundamental level, our choice was driven by four ‘must-haves’ that were nonnegotiable: we wanted the highest reliability technology, the most robust applications, the deepest experience and expertise on the support side, and a partner who took our business as serious as we do ourselves.”

“We evaluated a number of competitive options, and in the final analysis, only Avaya was able to satisfy all four of our key requirements.”

The Core Platform

“Since making our decision, we have standardized on an Avaya infrastructure and have built out a voice network of significant proportions. Currently, we have 33 IP-enabled Avaya DEFINITY Communications Servers that support 5-digit dialing for over 15,000 endpoints. For voice messaging, we rely on seven fully networked Avaya INTUITY™ AUDIX® systems.”

“Two Avaya Call Management Systems power multiple high-volume call centers, which handle over two million calls a year. Our call centers are quite sophisticated and utilize Avaya Interactive Response units on the front end, CTI (computer-telephony interface) database links, as well as skills-based and time-of-day routing.”

Shifting to IP Telephony

“Our decision to convert to IP Telephony was an easy one. Initially, all of our Avaya servers were operating as traditional PBXs, supporting a variety of digital and analog terminal sets.”

“One of the great features of Avaya technology is its high reusability and the resulting investment protection that you get for your business. We were able to readily upgrade and IP-enable each of our DEFINITY Communications Servers with minimum financial outlay.”

“Since all of our features remained the same, no end-user training was required. We were also able to re-use all of our existing terminal equipment. When you’re talking about 15,000 stations, that’s a huge savings that speaks volumes about the fundamental value of Avaya solutions.”

“One of my objectives is to think about the nurses on the floor and how I can make the day easier by placing the right information at their fingertips. With the Avaya one-X™ Deskphone Edition we now have options that we didn’t have before form making it possible to see a patient’s vital signs and medical records on the phone’s display screen to using the phone to broadcast emergency codes and messages.”

“We are already running packetized voice between our biggest Sentara locations, and we’re on target for full IP trunking by the end of the year. Our School for Health Professionals in Norfolk is completely migrated to IP Telephony right down to the Avaya IP Telephones.”

“Even though we are not fully converted to IP trunking, we have been able to remove a number of unneeded voice circuits. About \$25K of transport expense has already been trimmed from our annual budget. That savings will continue to grow as we finish our conversion and move all of our internal voice traffic to the Wide Area Network (WAN). If you’re interested in driving costs out of your IT budget, convergence is really the way to go.”

Comprehensive Communications Support

In addition to standardizing on Avaya technology, Sentara decided to enlist Avaya Global Services as its strategic support partner.

“Even though Sentara’s internal IT team has very strong hands-on skills, we knew that Avaya was the clear industry leader when it comes to supporting complex, mission-critical voice networks. In a ‘best-of-all-worlds’ approach, we decided on a highly collaborative partnership approach for supporting Sentara’s infrastructure.”

Flawless Implementations

“We look to Avaya Global Services to help with all of Sentara’s voice network deployments and upgrades. The Avaya Implementation team comes on board right from the start at the planning and needs assessment phase, and stays fully engaged straight through to design, testing and installation. In every one of our implementations, the Avaya engineering skills and expertise have been first rate.”

“Whenever we have a major initiative, Avaya assigns a Program Manager (PM). The Avaya PM coordinates all resources, including any third-party suppliers. If we need a

specialized Avaya hardware or software specialist, the PM will bring them onto the team.”

“The Avaya Program Manager also provides a single point of accountability and communication during the entire project, which frees up a tremendous amount of time for the Sentara IT team.”

“We typically perform a major software upgrade on each of our voice servers at least once a year. We wouldn’t think of undertaking any significant project without the involvement of a Program Manager.”

“There’s no arguing with success. Our largest single initiative to date was the conversion of all 33 DEFINITY Communications Servers to IP and the Avaya performance can be described in a single word — flawless.”

On-Demand Communication Consulting

“Avaya Global Services also has specialized groups of consultants that can come in and perform very specific types of expert support.”

“We have used the Avaya call center specialists on a number of occasions, most recently to help us design and deploy the advanced call handling algorithms behind our skills-based and time-of-day routing.”

“Avaya also has a team that specializes in ensuring network readiness for IP Telephony. We asked them to verify that our WAN was able to carry voice packets with a high quality of service before we cut our School of Health Professionals over to full IP to the desktop. There’s no substitute for bringing in the experts.”

Full Lifecycle Support

“Our collaborative approach to servicing Sentara’s network extends to ongoing maintenance as well. Since we have members of our IT team on-site at most Sentara locations, we opt to handle many of the routine day-to-day network activities like moves, adds and changes or call center scripting ourselves.”

“Given Sentara’s need for an ‘always-on’ voice network, we have Avaya provide 24/7 maintenance support on all of our sites. Avaya Maintenance Services is really about peace of mind and ensuring that one of our most critical business technologies is always operational. For Sentara, an Avaya Maintenance Services Agreement is an absolute essential — we wouldn’t be without one.”

“The Avaya EXPERT Systems Diagnostic Tools are really at the ‘heart’ of the protection you get with a Maintenance Services Agreement. These tools perform remote network diagnostics and have an amazing ability to prevent problems before they even occur. In the unusual circumstance that a problem cannot be cleared remotely, Avaya will send a

technician on-site with all the needed parts for a priority intervention.”

“Our Avaya Maintenance Services Agreement also gives us direct access to The Avaya top engineers. If we are thinking about activating a new feature or are planning a future network enhancement, we don’t have to spend hours doing research — we just call The Avaya Technical Support Hotline. Whenever we call, we get the right answer — even if it involves brand new hardware or applications. If the engineer doesn’t have the answer, they know all the experts and developers. Using the Hotline really gives back hours of productive time to our staff.”

The EXPERT ViewSM Report

“As part of our Avaya Maintenance Services Agreement, Avaya prepares an executive report that shows the full extent of the business value that Sentara receives. This EXPERT ViewSM Report is a clear and compelling analysis of the support that Avaya provides for Sentara 24-hours-a-day, every day of the year.”

“The Report shows all the key statistics in an easy-to-absorb graphical presentation — the number of troubles and alarms that were cleared, the priority dispatches that were required, and even all of the proactive preventive maintenance routines like battery power inspections and system security checks.”

“When you have a business as active as ours, it’s easy to lose sight of all the Avaya activities that allow the network to run at continuous peak performance. Until I saw the report, I didn’t realize that fully 98 percent of all of Sentara’s voice network trouble conditions were resolved automatically before any member of the IT team was even aware of them.”

“Whenever I’m in budget discussions with our Finance group, I always use the charts in the report to show the amount of money Sentara has saved by having Avaya Maintenance. The EXPERT View Report really drives home the exceptional value of an Avaya Maintenance Services Agreement.”

A Deepening Relationship

“We view our arrangement with Avaya as more of a strategic relationship than a traditional business partnership. When you have a strategic relationship — like we have with Avaya — there is a mutual investment in the success of the other party.”

“The Avaya team shows us every day that they have a genuine investment in the well-being of our business, and they routinely go out of their way to do the right thing for Sentara. If the ultimate measure of our success is the

saving of lives, then Avaya is absolutely a key contributor to Sentara's success."

Looking Ahead

With the Avaya IP Telephony platform fully in place and Sentara's business facing a period of growth, Debra and her team have already lined up their major projects for the next two years.

"We are considering the conversion of our existing voice messaging systems to Avaya Modular Messaging. In addition to lowering our costs of IT administration and message storage, the use of IP standards like Q.SIG will enable us to utilize advanced applications like company-wide LDAP directory. Once we have this new platform completely deployed, we intend to take a close look at full multi-media Unified Communications."

"Since we are running short of physical space in our current call centers, we're eager to launch a trial of the Avaya IP Agent application, which will enable us to locate

agents anywhere they can establish a secure VPN connection to Sentara's WAN. Together with our growing use of telemedicine applications, this type of remote worker scenario has us very interested in a trial of Avaya IP Softphone applications."

"With over a half billion dollars of new construction scheduled for completion by 2005, we expect Sentara, together with our Avaya Global Services partner, to be very busy in the convergence space. As it currently stands, we are viewing our new facilities as ideal 'Greenfield' locations to deploy Avaya S8700 Media Servers along with all IP endpoints."

Learn More

For more information on how Avaya can take your enterprise from where it is to where it needs to be, contact your Avaya Client Executive or Authorized Avaya BusinessPartner, or visit us at www.avaya.com

ABOUT SENTARA HEALTHCARE

The premier not-for-profit health care provider in southeastern Virginia and northeastern North Carolina, Sentara Healthcare is one of the most progressive and integrated health care organizations in the nation. Founded in 1888, Sentara offers an integrated network of care giving to more than two million residents and visitors.

Sentara Healthcare is comprised of 6 acute care hospitals, a hospital for extended recovery, 2 outpatient care campuses, 7 nursing centers, 3 assisted living centers, 25 primary care practices and an accredited School of Allied Health Professions. Sentara also offers a full range of health coverage plans, home health and hospice services, physical therapy and rehabilitation services, urgent care facilities, mobile diagnostic vans, and air and ground medical transport services, including Nightingale — the region's only air ambulance service.

For more information about Sentara Healthcare, visit www.sentara.com.

Applications	Systems	Services
<ul style="list-style-type: none"> • Avaya MultiVantage™ Communications Applications • Avaya INUITY™ AUDIX® Voice Messaging Systems • Avaya Call Management System (CMS) 	<ul style="list-style-type: none"> • IP enabled Avaya DEFINITY® Communications Servers • Avaya 4600 Series IP Telephones • Avaya 6400 Series Digital Telephones • Avaya one-X™ Deskphone Edition 	<ul style="list-style-type: none"> • Avaya Global Services Integrated Management Suite • Avaya Implementation Services • Avaya Maintenance Services Agreement <ul style="list-style-type: none"> - Avaya EXPERT SystemsSM Diagnostic Tools - Avaya EXPERT ViewSM Report

All statements in this Case Study were made by Debra Naderhoff, Director of Communication Technologies, Sentara Healthcare

