

Italian Hospitals Connected with Unified Communication System

ASL Bari boosts bandwidth, reliability, and features while slashing costs with ISR G2s.

EXECUTIVE SUMMARY

Customer Name: Azienda Sanitaria Locale (ASL) Bari



Industry: Public healthcare provider

Location: Bari, Italy and environs (9600 sq. km., 3700 sq. miles) in Bari province

Number of Network Users: 9000 total, located across 189 sites

BUSINESS CHALLENGE

- Reduce inefficiencies and costs caused by multiple separate IT systems
- Connect four healthcare communications systems with potential for up to 170 sites in a rapid, phased deployment
- Create merged voice infrastructure to reduce telephony costs while improving features and service

NETWORK SOLUTION

- Highly redundant, high-capacity WAN and VoIP infrastructures on a single IP network built with Cisco Integrated Service Router Generation 2 (ISR G2) platforms
- Outsourcing WAN and VoIP network monitoring and management eliminates complexity and enables small IT staff to concentrate on core concerns

BUSINESS RESULTS

- Adopting VoIP saves €600,000 (US\$750,000) per year in telephone expenses
- Integrated, highly available network eliminates packet and connection loss, providing quality user experience
- Centralized management and single-vendor support significantly reduce inhouse IT staff burden

Business Challenge

The city of Bari lies on the picturesque Adriatic coast in southeastern Italy, and is one of the largest industrial centers in the southern half of the country. Having historical ties back to pre-Roman times, today it is a manufacturing and economic center for the region, with a busy port and vigorous tourist trade. It is a very modern, industrial city that, while steeped in ancient history, is engaged in progressive, state-of-the-art technologies and business practices.

Four years ago, the regional government gave the ASL Bari IT and finance departments the difficult task of creating a unified IP network that would link 18 hospitals and 171 associated clinics and offices that serve the provincial population of over one million people.

Each of the ASL Bari 2, 3, 4, and 5 sectors had developed independently, with its own equipment and IT staff; the result was a complicated mix of vendors (Alcatel, Nortel, Huawei, Cisco®, and Avaya), WANs (Frame Relay and xDSL) connectivity (fixed line and bridge wireless), and service providers.

The task of consolidating these disparate networks into one appeared monumental. Massimo Scirucchio, CTO of ASL Bari, says, "The situation was a nightmare." Based on recommendations from CIO Ing. Maurizio Stasolla, Scirucchio and the now consolidated IT staff of four decided to eliminate complexity by choosing a single vendor that could build a large, advanced WAN and voice network, and a single service provider that could assume network monitoring and management tasks.

ASL Bari turned to its incumbent network vendors for proposals. In the end, Cisco, along with its partner NextiraOne, were selected to provide the systems and services necessary to complete and support the project, based upon several critical factors:

- True single end-to-end solution
- Proven expertise in all facets of the required technologies
- Company strength and reputation in Italy

- Ability to quickly provide a scalable, flexible network foundation that could be easily upgraded to accommodate future feature and bandwidth requirements

Network Solution

Together, Scirucchio and his staff, NextiraOne and its account team managed by Vincenzo Violante, and Cisco sales and service engineers developed a phased solution deployment and testing plan.

In phase 1, which was completed in 2008, ASL Bari built a highly redundant high-speed Cisco IP backbone WAN to connect the four ASL Bari systems. ASL Bari is now shifting its Nortel-based circuit-switched voice infrastructure to a separate packet-based IP network that can carry data, voice, and video traffic. First, the ASL Bari 4 WAN was rebuilt and new VoIP infrastructure installed; ASL Bari sectors 2, 3, and 5 upgrades followed. Next, the four sectors will be interconnected, and the integrated infrastructures tested for performance, reliability, and voice over IP (VoIP) quality.

At each site, Cisco ISR G2s route data traffic on the outsourced WAN, while a second set of Cisco ISR G2s serve as the voice gateways for the VoIP network. Cisco Unified IP Phones 7942 and 7962 IP Phones, equipped with Cisco Unified Communications Manager, support a broad set of convenient IP telephony features such as single-number reach, single directory, and extension mobility. In some cases, Cisco ATA 187 Analog Telephone Adaptors are connected to traditional telephones, turning them into IP devices that can take advantage of IP telephony capabilities.

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— Massimo Scirucchio, CTO of ASL Bari

ASL Bari employees no longer have to juggle devices trying to stay connected. Now they can access network resources; retrieve email, voicemail, and fax messages from one convenient location; and make and receive phone calls over secure VPN connections from anywhere.

Cisco ISR G2s were selected because they easily support multiple capabilities on a single platform with wire-speed performance. Although concentrating on voice this year, ASL Bari is looking to add other capabilities in the future as budgets permit.

The outsourced WAN will be managed by Telecom Italia, while NextiraOne will manage and monitor the large integrated WAN and voice infrastructures for ASL Bari, establishing a single point of responsibility for both communication systems. Remote management capabilities in the Cisco ISRs allow NextiraOne to centrally manage the sites.

Cisco Unified Communications Manager at their main site data center will handle all call processing and call-control signaling to reduce administration and maintenance costs. To keep critical voice communications always up and running, Cisco Unified Survivable Remote Site Telephony (SRST) software on each Cisco ISR G2 automatically detects a connectivity failure between its remote site and the main site and provides essential call-processing services for the duration of the failure. Once WAN connectivity is reestablished, normal IP telephony operation automatically resumes.

Business Benefits

NextiraOne Area Manager Violante says, "We've been working with ASL Bari since 1995 and clearly understand their needs, and we knew Cisco was the best choice for them. Cisco is the only networking vendor that can fulfill integration and easy manageability needs with its unified architecture. Cisco's solution combined with our expertise and deep knowledge of the customer's infrastructure created a perfect partnership."

The ASL Bari 2, 3, 4, and 5 VoIP integration is well under way, and already Sciricchio and IT staff see huge line cost reductions from the VoIP network. Sciricchio says, "By switching from fixed line to VoIP, we will save €600,000 in telephone expenses per year; or €3 million (more than US\$4 million) over the next five years."



The network is also realizing huge gains in bandwidth. The 2008 WAN deployment boosted bandwidth from 50 kilobits/second to 8 megabits/second. The current upgrade increases bandwidth to 60 megabits/seconds, a welcome enhancement, because as Sciricchio says, "My users ask for more bandwidth every day."

Just as importantly, network downtimes have plummeted from five to seven per month to zero to one per year. Once more, troubleshooting and recovery operations take minutes rather than hours or days, thanks to NextiraOne's technical expertise and Cisco network analysis tools.

Once both networks are up and running in a full production environment, Sciricchio and IT staff plan to work with NextiraOne and Cisco to add more sites and to potentially deploy network enhancements such as Cisco Wide Area Application Services (WAAS) network optimization, Cisco Prime™ Management, advanced security, wireless support, and video capabilities that can support exciting telemedicine applications.

Because of the Cisco ISR G2 router all-in-one design, each of these capabilities can be cost-effectively deployed simply by turning on a software switch on the router or by adding a new services module. This option contributes to the solution's high return on investment.

Says Sciricchio, "We have been impressed by the professionalism of NextiraOne and Cisco, and their willingness to work with us to build networks that will support our communications needs for years into the future."

PRODUCT LIST

Hardware

- Cisco ISR G2 1900, 2900, and 3900 routers and voice gateways
- Cisco CP-7942 and CP-7962 IP Phones
- Cisco ATA Analog 187 Telephone Adaptor
- Cisco Catalyst® 2960, 3750, 3560, 45xx

Software

- Cisco Unified SRST software
- Cisco Communications Manager
- Cisco Unified IP Phone 7942G and 7962G

For More Information

To find out more about Cisco ISRG2 and SRST go to:

<http://www.cisco.com/go/isrg2>.

To find out more about Cisco Unified Communications solutions go

to: <http://www.cisco.com/go/uc>.



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