

The Business Case for Managed

LAN/WAN Services

LOCAL AREA NETWORK / WIDE AREA NETWORK

BY ELISABETH HORWITT

Managing the corporate network is no easy task these days.

In today's global, information-intensive marketplace, an enterprise's competitive viability depends on the reliability, security, and performance of its network links. Furthermore, many companies are looking for a way to enhance their networks through leading-edge technologies such as wireless LAN applications, Voice Over IP, and network convergence, says Richard King, Executive Director at SBC DataComm.

Such offerings can significantly boost a company's competitiveness and reduce costs. However, many enterprise IT departments lack the in-house knowledge and resources to keep abreast of technologies that are changing faster every year. An April 2004 Gartner report on managed network services notes that "as budgets are constrained . . . new technologies emerge, and networks continue to grow in complexity, [IT staffs are becoming] overburdened by the day-to-day tasks of ensuring network uptime and resilience, while trying to maintain adequate security."

Enterprises are increasingly turning to managed network service providers for the expertise they need to ensure that the network infrastructure meets business needs over the long term.

North Texas Tollway Authority, for example, recently brought in SBC DataComm to help design, deploy, and then manage a new network infrastructure that included voice over IP, disaster recovery, and converged IP services. "As a political subdivision of the State of Texas, our pay scales are somewhere between private industry and public sector," says Rick Herrington, the Authority's assistant executive

director. "It was not feasible for us to hire full-time Cisco engineers and project managers."

OUTSOURCING EQUATES TO LOWER COSTS

Cost is the major motivator for such outsourcing deals, according to Eric Goodness, a Vice President of Research at Gartner. An outsourcing provider can manage a customer's network elements more effectively, at a lower cost than what it could achieve with in-house systems, he adds.

UMB Bank, for example, saves about \$4,800 a month through an outsourcing arrangement that gives SBC companies end-to-end management responsibility for the bank's converged IP voice/data network infrastructure. SBC company responsibilities include support and maintenance of on-site equipment and coordination among carriers.

By hiring a full-service managed network provider like the SBC family of companies, a business customer can take advantage of technical experts, as well as sophisticated, high-end management tools, that they can't cost-justify bringing in-house. Unlike most enterprises, "outsourcers are constantly refreshing their management technology," Goodness notes. Indeed, they need to do so, in order to meet customers' needs and stay competitive.

In addition to using off-the-shelf management platforms like Hewlett-Packard's OpenView and Cisco's Ciscoworks, SBC companies have developed specialized tools to manage leading- or bleeding-edge network technologies that do not, as yet, have "robust enough management tools," says Rodney

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Such systems permit SBC companies to manage a full range of customer networking equipment remotely, minimizing the need to go on-site to analyze or fix problems. This keeps delivery costs down. Threshold alerts notify staff of problems before they become serious enough to affect service levels. By managing the network proactively, outsourcing companies minimize outages and slow-downs that can hurt end-user productivity, revenue streams, and customer goodwill. Pre-written, rules-based programs perform basic tasks automatically, minimizing the need for human intervention.

LEVERAGING VAST EXPERIENCE

Outsourcing vendors can also take advantage of economies of scale through sharing out equipment, experts, and services among multiple customers. And they can use their clout to negotiate lower prices for network equipment and services, which they can then pass on to customers. According to Gartner, managed network service providers have lowered the monthly cost of managing customer premises equipment (CPE) by between 30% and 40% over the last 18 months.

Another benefit is the depth and breadth of expertise a full-service outsourcing company can bring to an outsourcing relationship. For example, says Godwin, SBC companies “spent a lot of resources and time becoming a leader” in emerging, increasingly strategic technologies like IP telephony.

Hiring outside expertise can provide a significant advantage when a company faces a major network upgrade or deployment. For example, SBC consultants helped First Texas Bank design and implement a new data network infrastructure to replace an obsolete and inefficient WAN. The bank now saves

approximately \$3,300 per month from the efficiencies provided by SBC PremierSERVSM Frame Relay Service and its PremierSERV Network Management services.

Outsourcing companies can also save internal IT staffs time, not to mention headaches, by providing a single point of contact with vendors. “We provide end-to-end WAN management, with no finger-pointing, because we take responsibility for dealing with all problems on the WAN,” including customer premise equipment and long-distance links, even if some of the circuits belong to another carrier, says SBC’s Richard King.

Another important benefit that customers get from network management outsourcing is quality control. Leading providers apply “strict fault management, configuration, and change management processes” to the network life cycle, according to Gartner’s Goodness.

By fourth quarter of this year, the full range of SBC company processes will be certified as compliant with the International Standards Organization’s TL 9000, a set of standardized quality requirements that apply specifically to the telecommunications industry. TL 9000 certified processes include installation, staging, customer care, managed services, and equipment engineering.

Last but not least, an outsourcing arrangement frees in-house IT staffs from repetitive, time-consuming 24x7x365 network monitoring tasks so they can concentrate on responsibilities relating to core business priorities.

A CONTINUING PROCESS

The SBC family of companies offers a full range of outsourcing services either à la carte, as part of a selective outsourcing arrangement, or as a comprehensive, ongoing partnership that covers all stages of the network lifecycle.

Phase 1: Evaluation/analysis/planning/design. The SBC company team of experts will come on board to assess the current network and the customer’s current and projected needs, then make their recommendation as to how the network infrastructure might be fine-tuned, upgraded, or replaced, in order to better meet the customer’s business communications needs.

Phase 2: Staging/implementation/project management: Too often, projects go off the rails because of vendor miscommunication, missed details, minor configuration errors, or bad planning, Godwin points out. SBC company-certified project managers, working closely with the customer’s in-house staff,

bring discipline and rigor to the various stages of network deployment.

SBC companies also have the facilities to thoroughly preview the new network configuration before it's deployed on the customer's sites. Unexpected problems are uncovered and fixed before they can affect end users and critical operations. Multivendor configurations, for example, can be tested thoroughly to ensure that different types of equipment and software work together without crashing or dropping bytes in transit.

Phase 3: ongoing management and support. SBC PremierSERV Network Management solution provides ongoing monitoring, maintenance, and management of whatever aspects of the installation a customer chooses to outsource. Services include:

- 24x7x365 monitoring of LAN and WAN installations by certified network engineers
- Adjustments, fine-tuning of network performance as needed
- A 24-hour help desk
- Ongoing assessment and evaluation of network performance, bandwidth utilization, and trends in demand, leading to recommendations for fine-tuning, upgrading, or perhaps replacing network elements—which brings users back to Phase 1.

ONE FROM COLUMN A, TWO FROM COLUMN B

Many SBC customers choose a full-service, full-cycle outsourcing relationship (see related story about the North Texas Tollway Authority). However, SBC companies recognize that some enterprises prefer to retain responsibility for certain aspects of their networks. To serve the needs of these customers, it provides selective outsourcing options as well as multiple grades of service that can be combined and tailored to the individual company's networking needs and budget.

For example: "A customer can continue to handle its internal customers and its users with an internal help desk, but augment its staff with an outsourcing vendor's specialists, who have the tools and the knowledge to provide sophisticated managed services," SBC's King says.

Some SBC customers manage their networks internally all the way up to the firewall, but outsource responsibility for the wide area network beyond the firewall, including both carrier services and customer premise equipment, such as edge routers.

Some customers choose to retain management responsibility for older technologies, such as an Ethernet LAN, while entrusting an outsourcing

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provider with newer technologies, such as Voice Over IP, with which the internal staff is less familiar. To serve this type of customer, SBC companies provide a pricing model based on the number of devices they monitor.

SBC companies also give customers a choice of management service levels. The PremierSERV Network Management's Basic level, for example, comprises 24x7x365 SNMP monitoring and fault management of customer premise equipment. The Essential level provides full fault and performance management, including isolation and resolving of network faults and 24-hour technical assistance. The Application Performance Management option provides application bandwidth optimization, as well as a detailed breakout of bandwidth use by application.

Whatever level and combination of services the customer chooses, the result is a flexible partnership in which the internal IT staff and outsourcing technicians share responsibility for the continuing health of the enterprise WAN and LAN infrastructures.

"For the last five years of Gartner surveys, customers' top three priorities (for IT outsourcing) have been: one, reduce cost; two, maintain a certain level of control; and three, educate us—make us smarter about our networks," Goodness notes. A full-service outsourcing vendor "can provide users with access to data they never had before, like how their networks are performing, where the congestion points are, where they're over-investing, and where they need to upgrade."

Tollway Authority

Saves Big With SBC Family of Companies

Bringing SBC DataComm in on a major new network installation “was some of the best money we have ever spent,” says Rick Herrington, Assistant Executive Director for the North Texas Tollway Authority. “They helped us make decisions that we expect to result in \$456,000 worth of savings over the next three years.” Adds Herrington: “We now think that’s a very conservative estimate, based on the paybacks we’re getting now,” particularly in terms of increased reliability from network design decisions made with help from the SBC family of companies.

About two years ago, the Authority, which constructs, maintains, repairs, and operates North Texas’ toll-road system, determined that its seven-year-old data network was obsolete. “We handle about 500,000 credit cards in our database, so it was critical not only to have the network up and running non-stop, but also to ensure that it stayed secure,” says Herrington.

Herrington’s group decided it was time for a major network upgrade, which would include replacing their Avaya voice network with an IP-based telephony platform.

The toll authority wanted a single vendor to provide a turnkey network from desktop to central office, as well as ongoing management and support “so that we could make just one phone call if something went wrong,” Herrington says. “We chose SBC companies partly because they already provided some of our land lines, but more because they had incredible resources for project management,” as well as a strong relationship with Cisco, the Authority’s primary network switch vendor.

During the initial design phase, SBC consultants did a thorough evaluation of NTTA’s business and communications needs. They performed a cost analysis that compared the ROI of going with Cisco’s AVVID switch for both voice and data, versus using Cisco for data and a different vendor for IP telephony. On SBC company recommendation, the authority decided to stick with Cisco.

“SIGNIFICANT” COST SAVINGS

Short- and long-term network design decisions made with the help of the SBC family of companies have resulted in significant cost savings and improved reliability, Herrington reports.

For example, NTTA has cut monthly telecom costs by

migrating from leased T1 circuits to a fiber optic connection. SBC engineers now maintain the fiber network. The authority is also reaping the benefits of reduced downtime, Herrington reports, “partly because of SBC companies’ fast response time (as stipulated by the SLA), but also because they helped us incorporate redundancy into the network.”

Furthermore, every time NTTA puts in new equipment, “we get the benefit of not having to reengineer the network, because SBC companies got us thinking long-term instead of short-term” in the network design, Herrington says.

SBC company professionals consulted with Herrington’s team during the critical staging and deployment stage. “They brought in full-time resources, like Cisco engineers and certified project managers, that we could never have afforded to hire in-house,” Herrington says. “The projects went extremely smoothly, considering the number of moving parts.”

The Authority and SBC companies now share responsibility for managing the voice and data network infrastructure. The SBC family of companies provided deployment help and training on HP OpenView and Ciscoworks. The Authority’s internal IT staff now use the management platforms to monitor internal network operations; SBC companies manage everything from the firewall out, along with round-the-clock security monitoring. “We need 24/7 security, but we’re not a 24/7 IT shop,” Herrington explains.

During weekly meetings, the two sides compare notes and bring up concerns: “For instance, ‘We’re seeing this issue on this segment of the network—what’s a good solution?’” Herrington says.

A long-term SBC PremierSERVSM maintenance agreement guarantees replacement or back-up within 24 hours for non-critical Cisco components—within four hours for critical components. NTTA could never deliver that level of service on its own, according to Herrington: “We don’t have Cisco engineers on staff, and it was not feasible for us to keep an inventory of spare parts.”

The two companies have been working together for almost two years now, “with SBC companies in a consulting role, assessing and evaluating our network on an ongoing basis,” Herrington reports. “It’s truly a partnership, a joint ownership of our voice and data network, and we’re reaping the benefits on a daily basis.”

Questions and Answers for

Choosing a LAN/WAN

Management Outsourcer

There's a contemporary saying that you date a technology vendor, but you marry an outsourcing provider. So when considering the outsourcing option, it's a good idea to ask a lot of questions before crossing the threshold. Below is advice from a cross-section of experts.

What network elements does the provider support? Are its technical engineers certified by the vendors you are interested in? If it's a network service provider, can it coordinate with other service providers?

What level of monitoring and troubleshooting does it provide? For example, does its management software simply track whether a network switch is up or down, or can it break out traffic by port and by application?

What types of management does the outsourcing company provide? Can it protect a network infrastructure against hacker break-ins and viruses, as well as congestion and outages? SBC family of companies recently introduced an intrusion prevention service that monitors "the trusted side of the network inside the firewall," looking for patterns in the information flow and device behavior that might indicate unauthorized activity, says Richard King, Executive Director at SBC DataComm. What type of guarantees does the outsourcer provide in its service level agreement (SLA)? SBC family of companies' SLA stipulates that it will provide alarm notification within 15 minutes, a four-hour mean time to respond to an equipment outage, and a ten-hour mean time for repairs.

What penalties or credits does the outsourcer provide for lapses in performance or reliability?

Can the outsourcing vendor's consulting group provide

independent recommendations for network upgrades that aren't biased in favor of the outsourcing provider's own offerings?

SBC companies recently acquired Callisma, an independent consulting firm that provides "granular specialization" in areas that include network security network management, LAN/WAN design, and IP telephony. Within SBC companies' staff of professionals are certified project managers and certified engineers.

Last but not least, how does the outsourcing company keep customers apprised of what's going on with their network? What level of detail and types of metrics do its service level reports provide? Can the customer report problems, track trouble tickets, and check performance and reliability levels online? What level of expert do you get when you first call the help desk?

SBC companies offer customers a range of options for reporting and sharing information, including a Web portal, onsite meetings with engineers during the design and installation phase, and a help desk where engineers are on call 24 hours a day, seven days a week.

"SBC companies recognize that an outsourcing relationship is a partnership that requires ongoing, two-way communications," says Rodney Godwin, Director of Managed Services at SBC companies. A customer who signs up for SBC PremierSERVSM Network Management service "...can contact us anytime; work with us on a trouble ticket as if they're part of our staff; bring up things they see; and be notified by us within 15 minutes if there's a failure or other issue."

Godwin continues, "Saying, 'Our door is open' isn't enough. The [outsourcing provider] needs to expressly enumerate what the contact points are as well as how frequently it will report and whether meetings will take place weekly or quarterly, and make this a standard part of the relationship."