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Upgrade Target: Telecom

Is 2009 The Year You'll Finally Upgrade Your Aging Telecom Infrastructure?



MA BELL CERTAINLY WOULD be proud of her staying power. Even in these Internet-driven days, telecommunications continues to play an integral role in the success of most enterprises, and due to telecom's continuing

importance, organizations can benefit greatly if they upgrade their architectures to the latest technology.

"New capabilities in telecom, including VoIP services, unified communications, and voice-enabled functions, may give the company an unparalleled opportunity to move ahead of its competition," says Mark Bradberry, senior consultant at Telwares (www.telwares.com). "These capabilities may include faster information exchange, improved process flow, [and] increased customer responsiveness."

As employees demand increased flexibility with their communication abilities, IT managers are under the gun to deliver technologies that can efficiently support mobile employees, telecommuters, and full-time teleworkers. Bradberry adds that the technologies that enable that support can also benefit the data center through a streamlined architecture, decreased effort, improved circuit management, and potential cost savings associated with lower cost of ownership and operation.

Upgrading a telecom infrastructure can introduce productivity-enhancing features such as find me/follow me, which enables an office number to "follow" employees to locations other than the office. IP telephony also provides increased phone number mobility, as well as the ability to initiate and accept calls from within applications employees already use, such as browsers and email clients. Yet another critical component of IP-based telecom technology is its ability to provide disaster recovery and business continuity through flexible network operations and portability.

■ Preparation Is Key

According to Paul Marra, vice president of business development for MegaPath (www.megapath.com), whether moving to a new telecom provider or sticking with the existing provider, an enterprise nonetheless should expect a significant overhaul when upgrading to an IP-based telecom infrastructure. Hardware evaluation and selection should be based on required features and budget, along with interoperability with existing hardware in the environment.

Key Points

- Upgrading a telecom architecture can increase the mobile communication flexibility of employees and help to bridge the gap between previously disconnected communication media.
- The most critical aspect of a telecom upgrade is gauging the network's preparedness for voice technology and making adjustments as necessary.

“The IT staff should identify potential vendors and ask for a demo,” explains Scott Kinka, senior vice president of network services for Evolve IP (www.evolveip.net). “The IT staff should involve a small group of employees who will be the most vocal about the use of the phone system, including a receptionist or assistant, someone in sales, and an interested executive. All vendors should be compared against a list of desired features.”

The installation and configuration of the new system should occur in a staging/testing environment, Marra says, and all features, including voicemail, greetings, and call routing, should be tested using temporary phone numbers that will not disrupt current business operations.

Before an IP-based telecom upgrade is rolled out, the IT organization needs to ensure that the network is fully prepared to handle the unique requirements and stress of the new technology. Kinka notes that VoIP traffic is far more sensitive to network issues than Internet or WAN traffic, and adding it to an existing network can expose problems that never truly manifested before voice was present.

To avoid such problems, Kinka recommends performing a thorough network assessment to ensure there is sufficient bandwidth (both LAN and WAN) and control for the introduction of IP-based voice capabilities. In particular, he says organizations will need to pay attention to where traffic transitions from LAN to WAN and that precedence will need to be given to voice packets on the network for timely delivery. Further, a complete network inventory will need to be completed, and IT staff should understand the current bandwidth consumption of existing applications and services, as well as future calling traffic patterns.

■ Tricky Investment

Telwares' Bradberry warns that telecom solutions offered by major providers and carriers tend to cater to enterprise clients rather than smaller clients, and in turn, they provide insufficient granularity to deliver a good fit to smaller organizations. As such, a one-size-fits-all approach could prevail.

“Even though the SMB's environment may be less complex than a larger enterprise, less attention may be given to the SMB's architecture and overall interoperability. The enterprise clients get the direct attention of the provider, while SMBs may be funneled through distribution channels. For the SMB, this can necessitate a pick-and-choose approach to topology, access, CPE [customer premise equipment], and management systems and result in higher unit costs, an imperfect fit to needs, and increased risk for the organization,” Bradberry says.

According to Bradberry, investments in a telecom upgrade can be wide-ranging: CPE may be added, upgraded, replaced, or disposed. Lease-vs.-buy decisions are necessary. New management systems could be required. Circuits may be combined or enhanced. New service contracts could be negotiated and implemented. Realignment of personnel into a more unified operation could be required to support the evolution of processes and procedures.

“The real question, however, is where you're going to spend the investment to maximize your return and minimize your costs,” he says. “That's why an assessment of total cost of ownership—i.e., full costs across the entire life cycle—is crucial. It is an incontrovertible best practice for any telecom upgrade, whether simply establishing new provider relationships or in a more complex infrastructure migration, to spend effort in evaluating, planning, and preparing for the change.”

■ Use Proper Attention

Bradberry recommends that SMEs looking to upgrade their telecom infrastructures be careful not to treat today's telecom like a plug-and-forget utility, because their businesses rely on the verbal and visual communication of information for personal interaction, as well as raw data communication for system-to-system interfacing and consumption.

“Forward-thinking, competitive companies embrace telecommunications as a strategic asset to support and enhance the goals of the business,” he says. “Inadequate communications can cripple an SMB's ability to perform its business and to thrive in a crowded and economically challenged marketplace.” ■

by Christian Perry

Where To Start: Follow The Fundamentals

Performing a major telecom upgrade is no small task, but taking the correct initial steps can ease the overall process. Mark Bradberry, senior consultant at Telwares (www.telwares.com), offers the following fundamentals for beginning a successful telecom upgrade.

- **Understand the business need.** Why is a telecom upgrade warranted? How does it serve the business?
- **Baseline the existing environment.** How is the current telecom environment constructed? What are its present and anticipated costs? Who are the current providers? What service levels are expected?
- **Assess total cost of ownership.** Beyond the upfront costs for purchase and implementation, what are the recurring costs over the entire life cycle? What savings might be achieved in people, processes, and technology? How might the expected investment be leveraged for the greatest benefit of the company?
- **Thoroughly plan for selection of architecture, topology, standards, and equipment.** What elements provide for the greatest balance of stability and functionality? What is off-the-shelf vs. bleeding-edge? How do different areas of the business impact the selection?
- **Choose the right partners and providers.** Who can provide the best prices and optimal cost of involvement across the entire term? Who can support the business and help it meet its goals? Who can guarantee the appropriate level of quality and face-to-face service?

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