



Choosing VoIP: What Every SMB Must Know

By Bryan Cohen, Senior Telephony Engineer, CDW

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The reasons to make the switch are compelling:

- Costs for moving, adding or changing a telephone connection. With digital PBX, many companies typically pay up to \$250 an hour for support services every time they want to change, add or move a telephone line. With an IP-based phone system, that cost is eliminated. Telephones can be moved to various locations because the VoIP telephone system software automatically recognizes it.
- Long-distance calls between offices. Many companies incur large long-distance bills while making calls between their office locations. These long-distance charges can be substantially reduced or potentially eliminated by using VoIP and IP Telephony because they avoid the tolls charged by ordinary telephone service.
- Long distance calls to clients. Many new VoIP-based telephone systems can support IP telephony from a typical telephony services provider. That translates into decreased long-distance costs between a company and its clients. In addition, companies equipped with VoIP may be able to eliminate the monthly service costs charged for dedicated voice services such as those carried over copper trunks or primary interface (PRI) lines.

To realize these cost-saving benefits, SMBs should consider immediately migrating to a VoIP solution if they're opening up a branch or satellite office where they can realize immediate cost savings through reduced or eliminated toll charges.

Similarly, SMBs with highly mobile sales or service forces that demand flexibility in how their calls are configured and routed should also realize the immediate productivity benefits of a VoIP system. For example, mobile workers can remotely configure their office phone to forward calls to their cell phone between 4 p.m. and 6 p.m. while they are running errands, to their home phone between 6 p.m. and 7 p.m. and back to their voicemail after 10 p.m.

Some VoIP systems also offer smart unified messaging that provides text to speech conversion. Imagine a sales person driving to an appointment and having their forwarded e-mail messages read out loud to them through their cell phone.

Converging voice and data is the fastest way to implement new and emerging applications, instant messaging and collaboration, across the enterprise. As VoIP

equipment providers open up their code to developers, additional niche applications are likely to emerge.

Despite these tangible benefits, VoIP isn't for everybody. Many customers fail to realize that while calls are cheaper, the new VoIP PBX boxes usually cost more than their predecessors. VoIP handsets cost about \$500 each -- twice that of older handsets.

Since many companies upgraded their office phone networks leading up to the year 2000, they have little incentive to upgrade again anytime soon. For SMBs especially, justifying the cost of implementing VoIP will be tough.

In addition, new demands imposed by convergence can easily overwhelm networks without appropriate planning and testing.

To avoid getting caught up in the "wow" factor of VoIP, and to ensure success with a VoIP system, companies considering a shift to VoIP should:

- Build in network redundancy. It's tough enough to run a business when losing connectivity to e-mail, let alone losing phone service. With VoIP, network redundancy is a must-have to get the network back online and to maintain both e-mail and phone service.
- Determine acceptable downtime. Depending on type of business you operate, VoIP may not be the best fit. If a telephone system plays a mission-critical role to your business, nearly 100 percent uptime is not only desirable but also a necessity. Since no network provider can guarantee 100 percent network uptime round-the-clock, the reliability of a digital PBX system may be the better choice.
- Have a strong knowledge of both data and voice networks and appropriate IT support. While a company with VoIP doesn't need separate voice and fax circuits or separate telecom and IT departments, it will need to integrate voice/VoIP experts into its IT operations to redesign the Internet backbone for voice, and to help manage and maintain the new VoIP and data network.
- Perform an electronic network assessment. The assessment of a company's network should be conducted prior to any purchases. It determines that the network supports Quality of Service (QoS) and the hardware upgrades needed. It also simulates VoIP traffic to demonstrate the effect VoIP will have on other network functions.
- Choose a system that will grow with your business. Because the technology changes rapidly, it must: 1) be easy to upgrade 2) have ample bandwidth and connectivity 3) include a plan to integrate Session Initiation Protocol (SIP), which provides the framework for delivering voice, video, data and wireless services seamlessly and transparently over a common network, and 4) come from a reputable vendor with staying power.

While most networking equipment purchased within the past year supports the QoS standard, companies with networking equipment more than a year old will need to consider support for a QoS network. Computer users won't notice if an e-mail arrives late, but they will detect even a slight delay in delivery of voice

data.

If someone says the word "cat" and the "a" arrives before the letter "c", the word heard at the other end will be "act." The QoS standard ensures that data containing words arrive in the correct order and that voice takes priority over data.

Most SMBs don't have switches that support QoS. While the cost of buying one 24-port switch for an SMB with only 20 PCs is minimal, a company with 400 PCs needs to weigh the costs and benefits. Does the cost of replacing switches and routers outweigh the savings on phone calls? If so, the company might be better off without VoIP.

Finding a good vendor is key to making the VoIP journey a success. Lacking a large IT staff, most SMBs will need to outsource integration and maintenance. Companies should seek a vendor such as CDW that provides a range of products to meet a customer's needs without a bias to any single vendor. It should have staying power and offer both the VoIP equipment and service.

Finally, any company implementing VoIP needs a good transition plan. VoIP systems differ considerably from the conventional PBX telephone systems. A PBX system is managed through a telephone set or terminal, while VoIP is managed via a GUI interface on a PC. Since it is unlikely that existing IT staff at an SMB has experience programming a VoIP system, someone on the IT staff or elsewhere in the office will need to learn how to maintain a QoS service.

Bryan is one of 200 vendor-neutral certified engineers and product experts that design and recommend IT solutions for CDW's SMB customers.