Checklist: Are You Ready for an IP Phone System?

Six reasons for moving to IP and questions that will help make the transition a success.
by Robert Poe | November 25, 2008

There are several possible reasons for moving to an IP phone system. Regardless of your personal motivations, you need to ask some serious questions to make sure you're getting a solution that meets your needs. Here are some reasons that might inspire your move, along with the questions to ask to make sure it succeeds.

1. You have simply outgrown your old phone system. If so, replacing it with an IP system is a no-brainer. It'll make your employees more productive in surprising ways. But moving to IP telephony often requires more than just a new PBX. To avoid unpleasant surprises, you need to know how much more you're going to have to buy. Some questions to help you pin down your costs include:

- **Can you use your old phones with the new system?** If it's a pure IP PBX, you'll need either new IP phones or some way to use your existing phones. The latter could mean spending significant sums on analog cards. Analog phones of course won't be able to provide all the functions of IP phones. Hybrid TDM/IP PBXes allow you to mix older TDM and new IP phones.

- **What changes will you have to make to your office data network?** With IP telephony, the office LAN will have to carry more traffic. It will also have to operate with minimal latency and jitter, so as to avoid degrading the voice quality of calls. Making sure your network is up to the job may take performance testing, or even an equipment upgrade.

- **How will the price compare to hosted IP PBX service?** It's a classic apples-to-oranges comparison. If you're going the premises route, you'll have the up-front cost of the equipment and the ongoing cost of administering and maintaining it. There may be configuration fees for phones as well. With hosted service, the main cost will be the ongoing monthly payments. But you will still probably have to buy your own IP phones or adapters, and perhaps pay setup or activation fees to the service provider. One key fact to remember is that purchased phone systems typically have seven-year life cycles.

2. You want to cut your communication costs. This is the most widely cited reason for moving to IP telephony. The savings can come in several ways. They may result from transporting your voice calls between branches over the IP link you already use to carry email and other data traffic. Or they may come from using Internet telephony services in conjunction with your IP PBX. There can also be combinations of the two, such as connecting your branches via Skype. These questions will help sort out what's best for your situation:

- **Will your new system integrate with any Internet telephony services?** A number of IP PBXes and related equipment lets you use Skype or a similar tool as an alternative to sending your calls over the PSTN. Digium Inc. has integrated Skype into Asterisk, for example. Fonality provides Internet voice transport through its trixNet service. VoSKY

and [Stonevoice's SkyStone](#) provide, respectively, hardware- and software-based Skype integration with IP PBXes.

- **Is there automatic least-cost routing that includes VoIP transport?** Some systems allow users to choose whether to make PSTN (public switched telephone network) or Internet-based VoIP calls by pressing different keys, typically 8 or 9, before dialing an outside call. A more sophisticated approach employs a least-cost routing engine to send calls the cheapest way regardless of type of transport. Some systems also fall back to PSTN lines when the quality of an Internet connection is insufficient to support a voice call.

- **Does it have built-in ENUM capability?** ENUM technology associates phone numbers with IP addresses, making it unnecessary to refer to PSTN databases to know which carriers to route VoIP calls to. Thus a ENUM-capable system can send VoIP calls directly to other VoIP providers where possible, avoiding the quality degradation and cost associated with moving to the PSTN and back again.

3. You want to be more responsive to your customers. Having your sales or support staff just pick up the phone when someone calls, put the call on hold and transfer it to someone else if they're not equipped to handle the problem is a relic of the pre-IP dark ages. Today [call center](#) technology isn't just for large companies — it can cost as little as a couple thousand dollars to upgrade to an IP PBX.

The technology will give customers the sense that they're dealing with a professional organization rather than a mom-and-pop operation. It would also be nice if your employees could see a screen pop providing instant access to all necessary data about a customer as soon as the customer calls. That's called [CRM](#) integration. Here's what to ask to make sure these things happen:

- **What do the system's call queues provide?** They should offer such features as customizable announcements and music on hold, and let you specify how long callers will wait or how many calls can be in a queue.

- **How does the ACD (automatic call distribution) feature work?** What criteria does it allow you to use for determining how incoming calls get routed, such as agents' skills or availability, or their previous contact with the customer?

- **What kinds of supervision does it allow?** The system should at least offer call monitoring and barging (breaking in on a call), not to mention recording. Does also it provide real-time viewing of agent and call center performance, or only after-the-fact reports?

- **With which CRM systems does it integrate?** Small businesses are likely to use [Salesforce.com](#) and [SugarCRM](#), so the system should be able to grab customer data from those services for that agent screen pop when the customer calls.

4. You are trying to make your company more efficient in general. Employee efficiency is one of the greatest potential benefits of the integration of voice and computing technology. Not every system, however, delivers it equally well. The basic minimum is the ability for users to receive their voice mail as email messages, containing either links to click to hear the messages or attached sound files containing the messages themselves. But that's only the beginning. In particular, an onscreen graphical call- and message-handling interface makes a huge difference. That leads to several questions:

- **Can users deal with voice mail entirely through such an onscreen interface?** Typically that means being able to listen to messages with a single click, and forward them to others by dragging and dropping.

- **How easy is it to handle calls onscreen?** Can users transfer calls to other employees or put them on hold by simply dragging and dropping? Can they see each other's availability or status before they make or transfer a call?

- **Can users initiate calls by clicking a contact's name?** It should be possible to call someone by clicking an online address book entry, or by clicking the name of the person who left a voice message.

5. You want to have more employees working from home. Perhaps you want to let your workers spend less time and money commuting. Perhaps you want to hire talented sales or service agents in areas where you don't have offices. Either way, IP telephony makes it a lot easier. To make sure it works, you need to be clear about several things:

- **What special equipment do home users require?** Can they get away with a broadband connection, along with a softphone running on and a headset connected to their computer? In that case, what kinds of PCs does the softphone run on? Or do the users need a particular type of IP phone certified to be compatible with your new IP PBX?

- **Does each home setup require an additional license fee?** That may be acceptable if you have a lot of people working exclusively from their homes. But if they split their time between the office and a couple of other locations, you're looking at tripling the cost of supporting their freedom of movement.

6. You want to make your mobile workers more productive. The key measurement of mobile productivity is how many capabilities of the office phone system employees can access while they're on the road. Systems vary considerably in the level of access they offer. Here are some questions to determine how they stack up:

- **Can incoming calls ring both desk and mobile phones?** This is the minimum level of mobile access to the office system, since it means users can receive business calls whether they're at or away from their desks.

- **How easily can users switch calls between cellular and office phones?** In some cases, it means pressing a key or two and having the other phone ring. In other cases, users just press a key, pick up the other phone and the call continues uninterrupted.

- **How easy is it for users to reroute their incoming calls?** Can they change the sequence in which calls to their business numbers ring their various phones? Can they set priorities for routing based on time of day or day of week, or on detection of their availability based on things like whether there is any activity on their computer? Can they easily use their mobile phones to change the routing, or do they have to do it through the Web interface?

- **Can mobile users access directory information, buddy lists and even presence information through their mobile phones?** Doing so usually requires client software running on handsets. The first question is whether such software is available at all for the system in question. The second is whether it's available for the handsets your users use.