

Choosing a Broadband Phone Provider

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Have you ever heard the acronym “POTS”? It refers to a technology that has been around for more than 100 years—and which you probably use every day. It means “Plain Old Telephone Service.”

A much newer acronym is “VoIP.” VoIP—Voice over Internet Protocol—defines a technology for making phone calls using your broadband Internet service. Did you know that you can do the same things with VoIP that you can do with POTS—plus a whole lot more?

VoIP services—often called “broadband phone”—are becoming increasingly prevalent across the nation, with most providers focusing on major metropolitan areas. However, this is changing. VoIP technology is constrained much less by geography than POTS is. This geographical freedom allows providers to offer services quickly in many new areas. It also is much less costly to get into the voice provider game with a VoIP solution.

The bottom line? VoIP is heading your way. If you’re in or near a big city, you’ve probably already had a salesperson call on you about a VoIP solution—even if they did not present it as VoIP. If you have not yet been given the “pitch,” you soon will.

What you need to know about VoIP

VoIP, with a few caveats, is a valid voice service that can be as good as or better than toll quality and be just as stable as any other POTS service. In fact, with added VoIP features like out-of-service routing, you are much less at risk to lose a call than with a POTS line.

Of course, any voice service is susceptible to “backhoe fade,” which occurs when the line is physically cut or damaged. With VoIP, however, your calls can be forwarded automatically to a second office or a cellular phone. In the worst case, the calls are forwarded to your voice mail. When traditional POTS is



down, however, your phones are completely out of service.

Hosted or premises-based VoIP

Two kinds of VoIP are available to your business.

Premises-based systems essentially are another kind of PBX. (I like to call them IP-PBXs). Most people already know how to choose this kind of system—and know about all the things that come with it: maintains, upgrades, service calls, etc.

This article focuses on Hosted VoIP solutions, which are similar to a Centrex solution. This kind of VoIP solution represents the industry's direction.

Hosted solutions usually are based in a central office, unless an Internet Service Provider (ISP) offers the service. In either case, the core of the system is not at your premises. The Customer Premises Equipment (CPE) typically includes IP network gear such as routers and switches that are tuned for voice traffic. You also will see IP phones on desks and perhaps some Analog Terminal Adapters (ATAs) for paging or other analog needs.

Other solutions may use an Integrated Access Device (IAD) to convert the IP signal into something that can be hooked to a PBX, like a PRI or even analog trunks. This solution is called IP Trunking, which is very similar to pure hosted VoIP.



The core of a VoIP solution

Unlike traditional POTS, VoIP does not require a room-size piece of equipment in order to provide the service. Instead, the core of the system is software. This software ideally resides on industry-standard servers at the CO (Central Office) or data room. (SUN servers are most commonly used.) The mix of hardware and software is called a soft switch. There are many different soft switch providers. The leaders in the market today are Genband, Broadsoft and Solantro.

Along with soft switch providers are software providers or freeware providers who write software that you install on your own servers. Don't confuse the soft switch vendors with VoIP providers. Some VoIP providers, such as Vonage, actually created their own software.

VoIP service also is delivered over IP-enabled links such as a T1 DSL or Ethernet services. Because of this, Internet Access should be part of the service. Some vendors charge extra for this access and some do not. This point alone may lead to cost savings, as combining voice and Internet over the same pipe is a much more cost-effective delivery method than having connectivity for both services separately.



Make sure your VoIP provider uses an industry-leader soft switch and industry-standard servers.

How reliable is the provider's equipment?

A VoIP provider that is serious about providing high-quality, dependable service will not depend on just one server. In a Genband solution, for example, at least two call agents are used with one backing up the other on hot standby. The system also includes many other servers, such as a media server, voice mail server, Web server, and conference server. In fact, as many as seven servers are involved in providing VoIP to a sole customer.



If your VoIP provider is running only one server, choose another provider.

What type of connectivity will your location have?

The best type of connectivity is a private dedicated connection to the VoIP provider's network. Transport is just one part of the solution: just as important is where the transport is going. You may be getting a T1, which is very reliable...but where does the T1 go? Try to think of it this way: You must deal with more than

one network. The network in which the T1 transmits is one network. The uplink to the public Internet and the VoIP provider could be a different network. Ask yourself: how much control does your VoIP provider have over your IP traffic over all these networks?

As mentioned previously, the best solution is to choose a vendor who provides T1 (or other transport) that terminates in the same network that provides the VoIP service. This means the provider controls the VoIP traffic end-to-end. If at any time the traffic travels over the public Internet, no provider can control whether or not the packet even shows up at its original destination. Even with a Virtual Private Network (VPN) connection, where the traffic may be encrypted and safe, the transmission is still under the influence of any delay or latency caused by the public Internet. This is a major precaution, but not necessarily a deal-breaker. You may get satisfactory service over the public Internet. Vonage for example, has based their livelihood on this type of service. The question is, do you want to base *your* livelihood on it?



For the most dependable solution, choose a VoIP vendor that provides the service on a proprietary network.

What type of CPE does your service include?

Most providers charge a per-seat price for VoIP service. The customer then must pay for the phones, routers, and any other equipment needed to get the service up and running. Some providers include the router; others may include other CPE.



Be sure you know what equipment is included in your provider's VoIP service—as well as whether or not installation is included.

Perform your due diligence.

Don't forget to check out the VoIP provider before you entrust your company's communications to them. Was the provider just formed in someone's garage? Is VoIP service something with which your ISP is "experimenting"? Make sure you are dealing with a well-respected provider by asking the right questions. How long has the vendor provided voice service? Can the vendor provide 911 services? Do they have references who you can consult? What else do they do? Are they a telephone company, ISP or something else? Trust me: not all VoIP providers are equal.



Check out the VoIP provider to ensure they are dependable and experienced.

What type of support do you get?

This goes hand in hand with due diligence. Does the provider provide 24/7 support? Is it live, e-mail, or other? Is there a local sales representative and sales engineer? Who do you have available to you in case things don't go as planned? Is the provider willing to consult with you on all your VoIP and data needs?



Choose a VoIP provider that provides technical support after the sale.

Is the service scalable?

Most hosted VoIP service by nature is scalable both in size and location. The main question comes back to the provider providing the service. Does the provider have the scale and the capital to provide for a large customer? What happens when your business grows? Can your provider keep up?



Look for a VoIP provider that can meet your needs as your business grows.

What does the service have to offer?

First and foremost, VoIP service must provide top-quality voice services. Some providers can deliver toll quality or better. Voice mail is the next big application needed. How does the voice mail work, and does the phone provided let you know you have voice mail? Does the provider have unified messaging? Will a Web portal be provided? If so, is it accessible from any PC with internet access? Do you need an auto attendant?

Most providers have call forwarding—but can they do time-of-day routing of calls or even find-me services? The find-me service is a “must have” service for most small businesses and even certain industries. In the real estate business, for example, a missed call can equal a missed sale.

When it comes to VoIP service, there is one big question that you should never forget to ask and it has many implications. Is the service mobile? If I need to take the phone to the house to work for a week will it work? This will not only cut down on the cost of moves, adds and changes, but it allows you the flexibility for employees to work from their homes or when they travel.



The best VoIP providers deliver calling features and a Web portal for true mobility.

Terms of Contract.

Be wary of long-term contracts from providers with whom you are not familiar. Some providers' contracts specify significant penalties if you decide to exit the contract. This is not to say that all contracts are bad. If you can get a good price from your provider, you may want to lock it in for three years.



Make sure you have a clear understanding of a VoIP provider's contract.

What do you have now?

If you currently have a PBX or Key system, find out what you will be giving up and what you will gain. If you are switching to VoIP service, you will have to make some changes. (If you want to continue communicating the same way you currently do, then stick with the system you're now using.) If you want next-generation technology such as VoIP, be prepared to do some things in a new way.

You'll find that most of the time, the new way is better and faster. Consider, for example, click-to-dial. Today you look up a number in a book or in Outlook and then try to remember the number while you type it in your phone. With VoIP click-to-dial, however, simply search in your Web portal for the number and just click it to dial automatically.

VoIP service also provides direct inward dialing. Everyone will have their own number and voice mail. This will take some of the calls off the receptionist, freeing up time to do other work.



Keep an open mind if you choose VoIP service.

Do your homework.

The bottom line? Before choosing a VoIP provider, talk to the salesperson and pin them down on what their service has to offer. Then go visit another customer with the same solution installed and working. Make sure you are choosing a reputable company to provide your services. *VoIP is just like most other products and services: you usually get what you pay for.* 