

# Connecting Your Customers To Your Most Qualified Agents Using VOIP: A Q&A Session

## What's the "Cloud"?

Cloud computing is Internet-based computing, whereby shared resources, software and information are provided to computers and other devices on-demand, like a public utility.

It is a paradigm shift following the shift from mainframe to client-server that preceded it in the early 1980s. Details are abstracted from the users who no longer have need of, expertise in, or control over the technology infrastructure "in the cloud" that supports them. Cloud computing describes a new supplement, consumption and delivery model for IT services based on the Internet, and it typically involves the provision of dynamically scalable and often virtualized resources as a service over the Internet. It is a byproduct and consequence of the ease-of-access to remote computing sites provided by the Internet.

The term cloud is used as a metaphor for the Internet, based on the cloud drawing used in the past to represent the telephone network, and later to depict the Internet in computer network diagrams as an abstraction of the underlying infrastructure it represents. Typical cloud computing providers deliver common business applications online which are accessed from another web service or software like a web browser, while the software and data are stored on servers.

Most cloud computing infrastructure consists of reliable services delivered through data centers and built on servers. Clouds often appear as single points of access for all consumers' computing needs. Commercial offerings are generally expected to meet quality of service (QoS) requirements of customers and typically offer SLAs.

Simply put, you don't have to understand the complexities, build the infrastructure, or manage anything you can find in the Cloud. You can just simply consume any number of services from vendors like ConnectFirst.

## What's SaaS?

Software as a service (SaaS) is a model of software deployment over the internet. With SaaS, a provider licenses an application to customers for use as a service on demand, either through a time subscription or a "pay-as-you-go" model. Also known as "software on demand," the SaaS model allows vendors to develop, host and operate software for customer use. Rather than purchase the hardware and software to run an application, customers need only a computer or a server to download the application and internet access to run the software. The software can be licensed for a single user or for a group of users.

SaaS software vendors may host the application on their own web servers or upload the application to the consumer device, disabling it after use or after the on-demand contract expires. While SaaS was widely deployed initially for sales force automation and Customer Relationship Management (CRM), its use has become commonplace by businesses for tasks such as computerized billing, invoicing, human resource management, service desk

management, and sales pipeline management, among others, according to a January 2010 Information Week article.

Simply put, we host all the pieces. You only pay for what you use, when you use it. We make it run, so you can run your business.

## **What's VOIP?**

Voice over Internet Protocol (VoIP) is a general term for a family of transmission technologies for delivery of voice communications over IP networks such as the Internet, or other packet-switched networks. Other terms frequently encountered and synonymous with VOIP are IP telephony, Internet telephony, voice over broadband (VoBB), broadband telephony, and broadband phone.

Internet telephony refers to communications services — voice, facsimile, and/or voice-messaging applications — that are transported via the Internet, rather than the public switched telephone network (PSTN). The basic steps involved in originating an Internet telephone call are conversion of the analog voice signal to digital format and compression/translation of the signal into Internet protocol (IP) packets for transmission over the Internet; the process is reversed at the receiving end.

VOIP systems employ session control protocols to control the set-up and tear-down of calls as well as audio codecs which encode speech allowing transmission over an IP network as digital audio via an audio stream. Codec use is varied between different implementations of VOIP (and often a range of codecs are used); some implementations rely on narrowband and compressed speech, while others support high fidelity stereo codecs.

## **I thought VOIP is supposed to be free.**

It is not free. Some providers may offer it “free of charge”; however the free version typically lacks features.

A carrier grade VOIP implementation is generally more expensive than its traditional Plain Old Telephone Service (POTS) counterpart. Delivering Voice Over IP is complex, and the equipment needed to process the requests is costly.

The reason VOIP has become the next vehicle for voice delivery, is the efficiencies gained in scale.

Simply put, once a company like ours has made the initial investments in infrastructure, talent, and all necessary resources, it then becomes easier to grow and react to the changing markets, as compared to the old way of doing it.

## **How about Skype and such? They're free.**

Yes they're “free of charge”, however if you need commercial grade features then it becomes a pay service.

Skype gives away its “walkie-talkie” service as a “loss-leader”. Meaning, they hope once they have your attention you will actually purchase additional services. Also, this is a known technique for harvesting user information, i.e., your name, location and computer usage detail.

## Is the sound quality going to be good?

**It depends...**

There are several factors which determine VOIP quality. These factors are also balanced against your needs.

**For example:**

Are you an at home phone agent? You may be able to perform your duties on a “home-grade” DSL or Cable connection. However, there are several items affecting the potential quality of the calls:

Is the connection shared with heavy users, i.e., people downloading media, playing games online, or uploading large documents?

Is the PC dedicated, or shared, in which case it may be plagued with Spyware, viruses, or performance robbing add-ons.

Are you using a USB headset, which will require more memory and CPU power to work well?

Do you live in an area prone to bad weather, and lose speed or the connection altogether frequently?

Are you trying to run a 50 seat call center with adequate bandwidth and adequate PCs? Still, there are issues which could affect quality:

Are some of the stations on Wi-fi?

Do you require several companion applications (Acrobat, Outlook, Word, and Google) to handle calls?

Do you have any PC policy management in place? Meaning, are you able to restrict your users from personal usage, and thus extraneous processing?

Is your networking gear QoS capable?

Do you have IT personnel on site?

The bottom line is the ConnectFirst platform is designed based on carrier grade architecture.

Assuming your environment meets standard acceptable practices, the quality is going to be second to none.

## What kind of Internet connection do I need?

It's really simple. Your connection should be commensurate with your application. So, for at home agents a dedicated synchronous DSL or Broadband connection with at least 1.5 mbps is fine.

For a large call center, you'll need to treat it accordingly. Ideally, fiber, or business class broadband data circuits.

For IP voice delivery, the bandwidth required to some extent is simple math:

Number of stations x 80 kbps.

So, for 15 users that would be +/- 1.2 MBps, or roughly the equivalent of an old data T1.

We've seen acceptable results (15 users) with symmetric business class DSL, or broadband in the range of 3mpbs (up/down) dedicated to voice. If your IP voice users grow, so should your bandwidth.

If your bandwidth is shared, you'll need more to satisfy all users' needs.

**Note:** This is only for voice. You still need adequate bandwidth to satisfy other tasks, such as email, browsing the web, document exchange, etc.

### What about my agents/users PCs?

PCs are more inexpensive than ever. You really need no less than:

3GB Memory

A decent CPU. At least a dual core Pentium in the 2.5 GHz range

A good monitor capable of at least: 1280 x 1024

For large call center environments, we highly recommend some PC policy management. We have had good results with MS Steady State:

<http://www.microsoft.com/windows/products/winfamily/sharedaccess/default.aspx>

### What's a softphone?

A typical application of a softphone is to make calls via an Internet telephony service provider to other softphones or to telephones. Service providers may offer PC-to-PC calls for free; PC-to-phone and phone-to-PC calls are usually not free.

Another type of softphone connects to a private branch exchange (PBX) through a local area network (LAN) and is used to control and dial through an existing hardware phone. This is often used in a call center environment to make calls from a central customer directory, and to show information on the screen about which customer is calling, instantly providing the operator with details of the relationship between the caller and the company using the call center. Some countries do not allow this PBX.

It's important to differentiate softphones from services based on softphones. Skype, Google Talk, and Vonage are Internet telephony service providers having their own softphones that you install on your computer. Unfortunately these three major providers are not interoperable, and you can't place a direct call between them.

We use softphones in order to leverage savings on our customers' behalf. By using a softphone, your agents connect directly to our platform without having to go out on the paid public telephone network.

Please note that this is not implementation requirement, and it may not be suitable for every environment.

When using a softphone, voice processing can become extremely resource intensive. Simply put, when you ask your computer to act as your phone, you will need excess processing power, i.e., CPU speed and memory. In order to process calls, in addition to companion applications like Outlook, Internet Explorer, Adobe Acrobat, Google, and anything else

needed to perform typical tasks, you will need a reasonably up-to-date and capable PC.

If the computer is under-powered, the sound quality of the calls will be negatively impacted.

There are generally two mitigating alternatives:

1. A more powerful computer. We've typically seen acceptable results with a minimum configuration which includes a Pentium 2.5 Ghz dual core, or better, and at least 3 GB RAM.
2. A hardware IP phone (instead of a softphone). Typical cost for a refurbished unit is around \$80-\$100.

### **What about networking gear?**

Voice processing is resource intensive. Your networking gear will carry an incredible additional load. For this reason, it's important that you plan your voice network accordingly.

The most important pieces will be your switches and your firewall. Switches need to QoS capable, and your firewall needs to be protocol aware.

QoS capable network switches/devices are appliances which allow you to prioritize the type of traffic which is served first. In this case, voice traffic should receive priority, vs. someone downloading a document.

Protocol aware firewalls are also important in voice processing. If your firewall is inspecting your voice traffic to make sure it is not an actual threat, it will create overhead and latency, which may lead to poor voice quality. You should be able to configure your firewall so that voice traffic is transparent, or trusted.

### **What VOIP/SIP phones do you recommend?**

Polycom and Astra have worked well in the past. Deploying 3-5 of these phones is labor intensive, but doable. If you're building a contact center, and plan to use 10+ SIP hardware phones, you will need an automated deployment strategy. Each vendor provides tools for doing this, and they will vary from FTP/TFTP to macro/scripts, web interfaces, etc. If you're not familiar with these "acronyms", you should plan on hiring an experienced professional to help with your deployment. You can also arrange to be trained (by the consultant) in post-deployment maintenance, so that you don't have to call someone every time a small change is needed.

### **What kind of headset do you recommend?**

We have had good results with USB headsets. If you're planning on using any USB headset, please consider how powerful your PC/Workstation is. USB audio processing will take CPU power away from other tasks. If your PC is already underpowered, chances are your voice quality will suffer. Analog headsets also work well, assuming your PC is equipped with a sound card, and they don't consume resources.

Please note that "old telephone style" (RJ11) headsets will not work with a PC configuration.

### **Can you help us build our network?**

We are not network design consultants. We can offer tips (you're reading most of them), or perhaps refer you to professionals we know.

### **We've never run a call center. Can you help us implement a solution?**

We will provide a carrier grade, world class SaaS solution. If you've never run a call center, chances are you will not have the fundamental background to be successful. It is not impossible to do, just not likely. We'd suggest getting professional help, so you may truly benefit from our systems.

### **Can you really be up-and-running in hours?**

If all the pieces are in place, then yes. Of course, the devil's always in the details:

- Adequate connectivity
- Adequate networking environment
- Adequate PCs
- Adequate Call center know-how

### **Do you provide training?**

Yes. We'll train you in the use of our systems. What our training does not include, is an education in Call Center management, or Call Center systems.

Assuming you have the requisite background, and understand most of the concepts, it's just a matter of showing you around the platform.

Our typical training session lasts 2-5 hours.

### **Do you provide support?**

Yes. Of course we support our systems. The scope of our support, however, does not include problems with your environment/facility.

For example, you may experience poor voice quality due to insufficient bandwidth, or bad cabling, or an inadequate PC, etc. We are not equipped, nor are we responsible for this type of support.

A good way to think of our relationship is: "We will bring into your building, but you must bring it into the cubicle".

We deliver a carrier grade, enterprise solution. Our platform is successfully used by thousands (literally) on a daily basis. We want to see you succeed, so we will be glad to recommend experienced IT consultants to help you achieve your goals.