



## Hosted VoIP: Comparison & Value Proposition

Jive Communications, Inc.

866-768-5429

[www.getjive.com](http://www.getjive.com)

## Introduction: Hosted Voice over IP (VoIP)

*Hosted Voice Over IP (VoIP) telephony is quickly becoming the standard communications platform for organizations of all sizes. The wholesale shift from traditional telephone systems to feature-rich Hosted VoIP service has already begun. Immediate cost savings is the most commonly cited benefit of adopting Hosted VoIP, along with increases in system reliability and worker productivity. This white paper explains some key differences between different types of systems, and also outlines the significant value proposition presented by Hosted VoIP.*

## Traditional Systems vs. Hosted VoIP

There are many telephone system options available to institutions, each offering various levels of cost, flexibility, and control. Some of the more common system types are described in Table 1.

In the last few years, the choices of Analog PBX/Key and Centrex systems have been transformed to use Internet Protocol (IP) instead of traditional Time Division Multiplexing (TDM). This transformation to IP-based technology has created the On-premises IP PBX and Hosted VoIP, which are rapidly gaining market share.

## Hosted VoIP Architecture

Hosted VoIP deployments require little on-premises equipment—in most cases, needed equipment is limited to a high-quality router, Integrated Access Devices (IADs), and IP telephones.

Although analog phones can be used in some cases, IP telephones are strongly recommended because they enable more features, require less hardware, and are easier to use. IADs are primarily used to allow institutions access to their existing analog handsets, credit card machines, alarms, fax machines, etc.

## The Hosted VoIP Value Proposition

Hosted VoIP offers significant value over legacy voice solutions. Table 2 summarizes the value offered by each voice technology. By delivering voice as a

hosted service, organizations realize financial savings, enjoy greater reliability, and experience enhanced productivity.

## Financial Savings

Financial savings is typically the primary benefit mentioned when discussing Hosted VoIP. The ability for institutions to save on both initial capital expenditures and ongoing operating expenses makes Hosted VoIP particularly attractive. Hosted VoIP

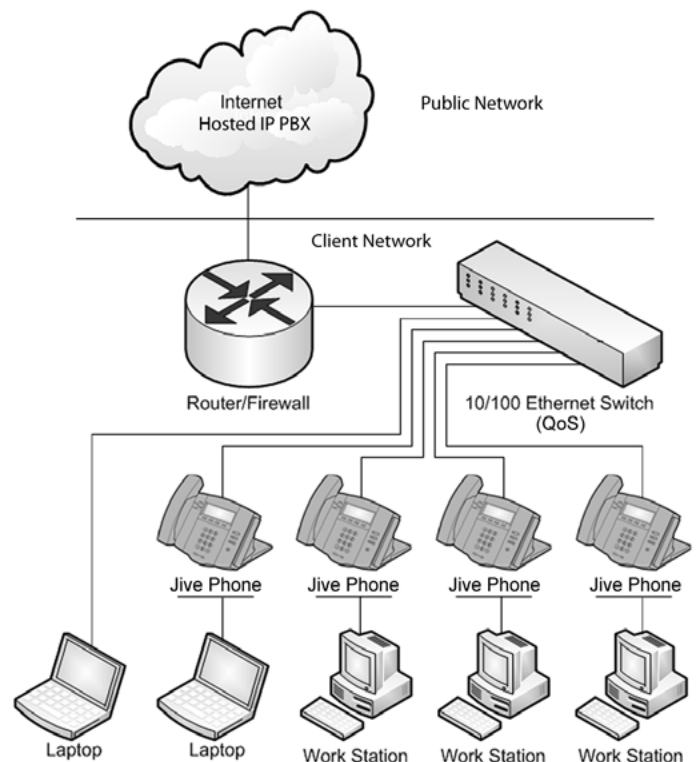


Figure 1: Hosted VoIP Network Topology

Technology	Description
Traditional PBX/Key Systems	Traditional PBXs are telephone systems that serve one organization at one location. These systems reside on-premise and are owned and maintained by the organization. Users share access to the trunk lines physically connected to the PBX. Though feature-rich, Traditional PBX systems require a substantial cash outlay and are cost-prohibitive for many organizations.
Centrex	Central Office Exchange Service (Centrex) is an enhanced telephone service offered by local phone providers. Institutions do not purchase a phone system, and no specialized hardware is required on-premise. Many disparate institutions are served by the same Centrex equipment. Though less expensive than a Traditional PBX, Centrex does not offer the same level of features.
On-premises IP PBX	An On-premises IP PBX is similar to a Traditional PBX, but utilizes IP (Internet Protocol) as the transport mechanism. These systems allow organizations to combine voice and data traffic on a single network, producing cost savings. Similar to Traditional PBX systems, there is significant up front cash outlay required, and organizations are responsible for maintenance.
Hosted VoIP	Hosted Voice Over IP (VoIP) combines the best aspects of Centrex and On-premise IP PBX systems. The provider owns and manages all necessary equipment, and the service is delivered via broadband Internet access. Hosted VoIP provides enterprise-grade features to many institutions on a scalable hardware infrastructure. Hosted VoIP is a cost-effective and feature-rich telephony solution.

Table 1: Common Voice Technologies

solutions can be customized to fit current budgets and projected growth requirements without forklift upgrades. Hosted VoIP also provides excellent ROI and cost savings through increased staff efficiencies and technological effectiveness.

It is hard to impossible to save money in the long term with on-premises systems. The staffing, system upgrades and maintenance needed create an costly, ongoing expense. By eliminating these costs, Hosted VoIP provides a dramatically reduced total cost of ownership to organizations. The consolidation traditional telecom expenses with IT infrastructure in a Hosted VoIP solution gives IT directors and facilities (M&O) management staff

the opportunity to focus on important site issues, rather than worrying about telephone system availability.

Today's budgets are tight and IT decision makers more than ever are concerned with the financial impact of their communications solutions. Hosted VoIP can often deliver the greatest return for telecommunications budgets.

### *Low Capital Requirements*

Hosted VoIP has very low initial capital requirements, especially if a data network already exists. In particular, IP phones are the only capital expenditures necessary in most cases. In comparison, Analog PBX and On-

Financial Savings	PBX/Key	Centrex	IP PBX	Hosted VoIP
Low capital requirements		●		●
Standards-based equipment			●	●
Low risk of obsolescence				●
Converged voice, data, and video lines			●	●
One provider, one number		●		●
Utilize stranded capacity				●
Simplifies moves, adds, and changes			●	●
Predictable monthly expenses		●		●
No payment until service on		●		●
Flexible to organizational changes				●
<b>Greater Reliability</b>				
Professionally hosted voice infrastructure		●		●
Managed class-of-service internet access				●
End-user control			●	●
Disaster recovery			●	●
Local survivability via PSTN*			●	●
<b>Enhanced Productivity</b>				
Cohesive services for distributed workforces			●	●
Support for remote users			●	●
Easy rollout of new features		●		●
Mobile phone integration and applications			●	●
End-user productivity features			●	●
Unified Communications			●	●

Table 2: Value Comparison of Voice Technologies

premises IP PBX technologies requires large capital outlay for the servers, the required phones, and expensive maintenance and licensing contracts. These costs often reach millions of dollars. For this reason, many institutions decide to avoid up front capital-intensive solutions and utilize a Hosted VoIP provider.

### *Standards-Based Equipment*

The equipment necessary for Hosted VoIP is standards-based, which means it can be easily reused or redeployed to work with other equipment that supports the same open standards. It also offers more flexibility and equipment options from a variety of vendors, typically at lower costs. By contrast, On-premises IP or Analog PBX solutions typically have proprietary equipment that can only be used with that particular

vendor's equipment. This proprietary equipment cannot be reused or redeployed in most circumstances, resulting in "vendor lock-in." It also results in an inflexible solution with limited equipment choices and higher hardware prices.

### *Low Risk of Obsolescence*

Technology changes at a rapid pace, and it is common for equipment to become obsolete quickly. Hosted VoIP reduces this risk in several ways. First, since the amount of necessary equipment is low, the risk also remains low. Second, the risk of obsolescence shifts to the Hosted VoIP provider since they own and manage the voice infrastructure. Third, Hosted VoIP allows institutions to grow or shrink their number of lines as their organization changes, without the risk of 'outgrowing' the solution. As an organization grows, the same system they used with only 100 handsets can scale up to 10,000 handsets or more.

### *Converged Voice, Data, and Video Lines*

The merging of multiple networks down to one converged network can save on the number of necessary access lines and subsequent maintenance costs. In many cases, current voice traffic and data traffic utilize two separate internet access lines—one for voice and another for data. After merging the two networks, one of those access lines can typically be dropped, used solely for backup purposes, or combined to allow more bandwidth on the single converged network. In either case, access costs will be lowered or available bandwidth will increase. This is true for all types of data transport service including DSL, Cable, T1, DS3, fiber, etc.

This benefit is especially pronounced when Hosted Video is deployed. Rather than purchasing dedicated ISDN or similar connections solely for the video equipment, the converged network can be leveraged to provide connectivity on an "as-needed" basis. When

no video is being used, this bandwidth is available to be used for other network activities.

### *Utilize Stranded Capacity*

In certain circumstances, converging voice and data can assist in eliminating "stranded" capacity—meaning capacity that is not being consistently utilized and is therefore wasted. Adding voice onto an existing internet access line will increase the traffic over the connection and utilize the stranded capacity. This makes the existing infrastructure more cost effective.

### *Internal Cable Infrastructure*

Existing voice and data networks are separate in many districts. Voice is transported over traditional Cat 3 while data is on an IP network. Organizations are looking to consolidate and transmit both voice and data over a single physical network to decrease costs and increase options. Voice, video and data consolidation on a single physical network provides many benefits to support staff by reducing operational costs, maximizing efficient use of network resources and providing a flexible platform. These capabilities are important for adapting to a constantly evolving, unpredictable, and increasingly competitive communications landscape.

### *One Provider, One Number*

Hosted VoIP allows institutions to receive both voice and data service from one service provider, with one number to call for both questions and support. This helps to simplify the support process and reduce the number of necessary support personnel.

### *Simplified Moves, Adds and Changes*

Some of the biggest telecommunications expenses incurred by organizations are generated as a result of moves, adds and changes (MACs) to their phone system. Traditional phone systems require intensive effort every

time an employee moves offices or locations, often by third parties that charge hourly or per-visit fees. Hosted VoIP simplifies this process, allowing these changes to be quickly and easily performed by the enterprise administrator through a point-and-click web-based interface. Many changes can be accomplished by end-users themselves. MACs in a Hosted VoIP environment take just seconds, are completed in real-time, and do not require any budget expenditure.

### *No Payment Until Service Is On*

With Hosted VoIP, monthly service charges are typically not billed until the service is turned on and fully functional. This provides additional flexibility to the organization with regard to the start-of-service date, and reduces wasted spending due to duplicate services.

Moves, additions, and changes in a hosted VoIP environment take just seconds and do not require specialized technicians or per-incident service charges.

### *Predictable Monthly Expenses*

Hosted VoIP allows organizations to know exactly what their telecommunications costs will be each month. There are no unexpected costs associated with software upgrades, licensing, or hardware maintenance. In addition, local and long-distance calling are typically included with the service, without any per-minute charges. This makes monthly budgeting predictable and easy.

### *Flexible Organizational Changes*

Today's workforces are constantly growing and shrinking—creating problems when using traditional phone systems. Legacy solutions may not easily expand or contract if the workforce changes over time. Hosted VoIP services allow institutions to buy only what they need, with the ability to add or remove lines as necessary. Organizations only pay for the number of lines needed at any given time. Associated configuration changes are also provided at no charge.

### *Greater Reliability*

The ability to communicate is a critical element of success. For this reason, voice reliability cannot be compromised. Hosted VoIP has been engineered with this in mind. In fact, Hosted VoIP has distinct reliability advantages over both traditional voice and on-premises IP PBX services.

### *Professionally Hosted Voice Infrastructure*

Few organizations would consider themselves expert data center operators. But On-premises PBX solutions require organizations to do just that—host their own phone system at their own location, and at their own expense. If something goes wrong, the organization is responsible for correcting the error. Given the importance of communication, this creates a large burden on the institution to be prepared for the unexpected.

In contrast, Hosted VoIP relieves the institution of this responsibility. Since the phone service provider owns and manages the server equipment, it is responsible for its upkeep. It is much more cost-effective for the service provider to hire experienced IT managers and data center operators because they can spread the expense across a much larger user base than any one customer could.

### *Managed Class-of-Service Internet Access*

A select group of Hosted VoIP providers offer managed class-of service internet access. This access refers to the active prioritization of voice and video over other types of network traffic. When this type of internet access is offered by the provider as part of the service package, the institution can be confident that voice quality will be maintained even during periods of network congestion.

### *Disaster Recovery*

Users of Hosted VoIP have a variety of disaster recovery options. In the event of fire, earthquake, severe weather, or even a simple failure of their internet access lines, users have the ability to reroute all calls to wireless numbers, a home phone or a third party answering service. Many hosted VoIP solutions can be set up to automatically make these changes for users in the case of a disaster. IP phones can also be taken off site, where they can be used with any high-speed internet connection and continue to function as part of the Hosted VoIP system.

The location of the servers in a Hosted VoIP solution is another critical feature. Service provider points of presence (POPs) are secure facilities built to withstand more than traditional office buildings. For this reason, servers in a POP have a higher chance of surviving a disaster and maintaining service than a PBX sitting in a business's office complex. Even if a customer's location is destroyed by a disaster, users will have phone service or the flexibility to obtain phone service. In practice this means that callers' ability to access menus, voice mail, etc will be preserved, even if the organization's on-site communications are completely severed.

### *Local Survivability via the PSTN*

In the event of a local internet access line failure, options for emergency dialing from a local gateway are available with Hosted VoIP. This preserves an important

safety element by allowing continued access to 911/ emergency services via the PSTN, even if the internet access line used to connect to the Hosted VoIP service is temporarily unavailable.

### *Enhanced Productivity*

Hosted VoIP enables many features, functionality and enhanced applications that are not possible with traditional solutions. Although financial savings and service reliability are critical considerations when moving to Hosted VoIP, these productivity-enhancing items are what organizations learn to leverage, appreciate, and eventually depend upon for daily operations.

### *Cohesive Services for Distributed Workforces*

Hosted VoIP services break down the boundaries associated with traditional telephone service. Since traffic can be routed to any location connected to the network, functions that use to be tied to a particular location can now be moved anywhere or even distributed to multiple locations. For instance, a call center can be centrally managed while supporting geographically-dispersed agents and multiple locations. This allows call center agents to work from anywhere—even from home.

Similarly, a single voice mail system can serve a geographically dispersed group of users. This not only saves money by having just one voice mail system but also allows all users to access their voice mail from anywhere.

Likewise, functional groups can office in various locations and use extension dialing—saving the institution money previously spent on inter-office communications while still ensuring emergency and local dialing plans remain intact.



## *Support for Remote Users*

More and more employees want the ability to work effectively from home or while traveling. At the same time, institutions gain from remote employees by reducing required real estate and increasing employee satisfaction.

Hosted VoIP enables remote users in a variety of ways:

- Users with a home broadband connection can plug in their phone and access the same features available in the office.
- Users who travel frequently can carry their desk phone with them and operate as if they were still in the office.
- Users can access a web portal for their corporate directory, to view call logs, and to setup find me services.

These features provide the means for remote users to effectively work while at home or traveling.

## *Easy Rollout of New Features*

As new features become available on a Hosted VoIP platform, the provider can automatically make them available to institutions and end-users. This is done without performing any truck rolls or installing additional equipment at the customer premises. By contrast, On-premises IP or Analog PBX solutions often require an expensive software upgrade by the customer to access the new feature. The customer must also implement the feature throughout the organization themselves or pay a third party for this service. Again, the burden is placed on the customer to perform these maintenance tasks.

## *Mobile Phone Integration and Desktop Applications*

Even though enterprises are increasing the number of company-paid mobile and smart phones, few phone systems today allow integration with desktop and

mobile productivity tools. Hosted VoIP applications allow employees with a browser-enabled smart-phone to access their end user portals. Employees are readily accessible to clients and coworkers and can enable/disable call routing functions and features for their extension. Employees with traditional mobile phones can also use simultaneous ring services to send incoming calls to both their desk and mobile phones at the same time.

## *End User Productivity Features*

Hosted VoIP technology offers end users and institutions significant new features that can greatly enhance their productivity and streamline business processes. Some enhanced features enabled by IP-based voice solutions include the following:

**Unified messaging.** Hosted VoIP allows users to have their voice mail messages sent to their email inbox. This allows a user to listen and then file the voice mail or forward it to another user.

**Find-me Follow-me.** Users set up a profile of where they will be throughout the day, and their calls are automatically forward to the correct phone and location. This helps ensure that users never miss an important call.

**Dial-In Conferencing.** Users may be invited to join a dial-in conference line to increase productivity for a project. Some enterprises pay large monthly expenses to third party vendors for this feature, which is often included at no additional charge with Hosted VoIP.

**Auto-attendant.** An organization using a Hosted VoIP system can set up automated answering on any incoming number without purchasing any additional hardware. This feature can reduce the need for a human receptionist and enable the organization to provide after-hours service or information in an economical way.



### *Unified Communications (Email, E-Fax, EMS)*

Hosted VoIP providers offer organizations the opportunity to unify their communication tools and mediums. For example, all system voice mail messages can be forwarded to one or more users via email. Additionally, E-Fax services can be integrated with the Hosted VoIP system, eliminating the need for analog, paper-based fax machines.

## About Jive Communications

Jive Communications is the premier hosted IP telephony provider to government, education, and business institutions.

Jive Communications, Inc.


Toll-free: 866-768-5429

Fax: 866-372-5429

<http://www.getjive.com>

## Conclusion

Hosted VoIP introduces a powerful new set of enterprise-grade and productivity-enhancing features to organizations and individuals. These features are delivered at a superior price point compared with legacy telephony solutions and give Hosted VoIP a dramatically lower total cost of ownership.

The telecommunications industry is undergoing a technological shift away from TDM and On-premises PBX products and moving towards Hosted VoIP solutions. Hosted VoIP substantially reduces the complexity of system installation, configuration, upgrades, and maintenance by shifting the burden from the customer to the Hosted VoIP provider. An ever-increasing number of organizations are evaluating and implementing Hosted VoIP as a means of lowering costs and increasing productivity. 

*Copyright © 2006–2013 Jive Communications, Inc.*