

**White Paper**

# **Cloud Phone Systems Comparison and Value Proposition**



## Introduction: Cloud Phone Systems

Cloud phone systems are quickly becoming the standard communications platform for enterprises of all sizes. The wholesale shift from traditional telephone systems to feature-rich cloud phone systems and unified communications is well under way. Immediate cost savings is the most commonly cited benefit of adopting cloud phone systems, along with rich feature sets, increases in system reliability and improved worker productivity. This white paper explains some key differences between different types of systems and outlines the significant value proposition presented by cloud phone systems.

## Traditional Systems vs. Cloud Phone Systems

There are many telephone system options available to enterprises, each offering various levels of cost, flexibility and control.

### 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 ongoing maintenance and are cost-prohibitive for many organizations.

### On-Premise IP PBX

An on-premise IP PBX is like 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. Like traditional PBX systems, there is significant up-front cash outlay required, as well as the cost of ongoing maintenance.

## Cloud Phone Systems

Cloud phone systems combine 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. Cloud phone systems provide enterprise-grade features to many enterprises on a scalable hardware infrastructure and enable true unified communications, where multiple communications methods (telephone, email, voice mail, etc.) are integrated so that they communicate with each other and provide a consistent unified user interface and user experience across multiple devices and media types. Cloud phone systems are a cost-effective and feature-rich telephony solution.

## Cloud Phone Systems Architecture

Cloud phone systems deployments require little on-premises equipment-in most cases, needed equipment is limited to a 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.

A simplified diagram of cloud phone system architecture is depicted in Figure 1.

### Cloud Phone System Architecture

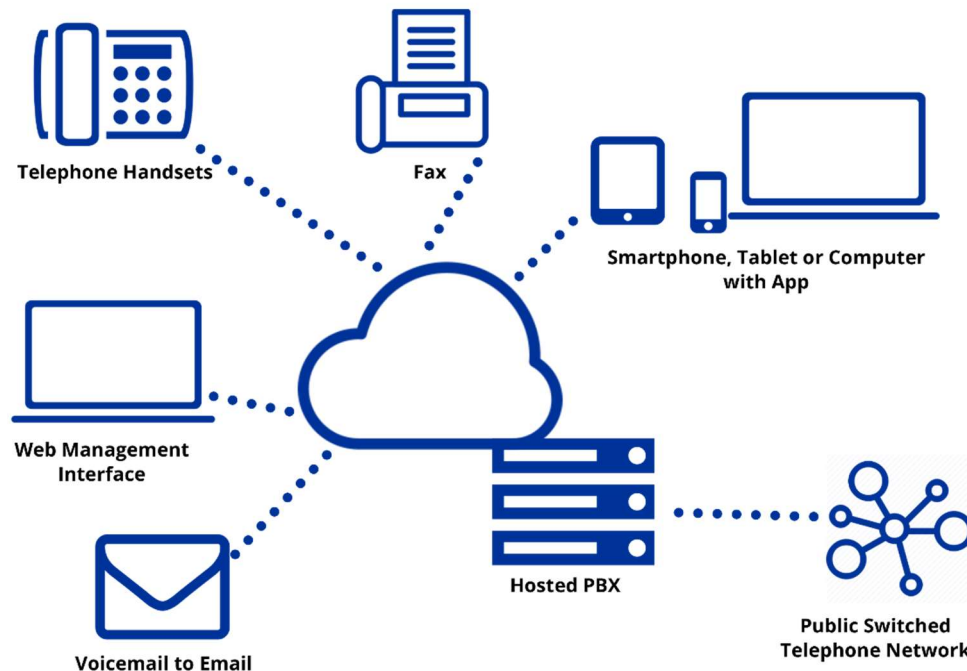


Figure 1

## The Cloud Phone Systems Value Proposition

Cloud phone systems offer significant value over legacy voice solutions. By delivering voice as a hosted service, enterprises realize financial savings, enjoy greater reliability and features and experience enhanced productivity.

### Financial Savings

Financial savings is typically the primary benefit mentioned when discussing cloud phone systems. The ability for enterprises to save on both initial capital expenditures and ongoing operating expenses makes cloud phone systems particularly attractive. Cloud phone systems solutions can be

customized to fit current budgets and projected growth requirements without forklift upgrades. Cloud phone systems also provides excellent ROI and cost savings through increased staff efficiencies and technological effectiveness.

It is nearly impossible to save money in the long term with on-premises systems. The staffing, system upgrades and maintenance needed create a costly, ongoing expense. By eliminating these costs, cloud phone systems provide a dramatically reduced total cost of ownership to organizations. The consolidation of traditional telecom expenses with IT infrastructure in a cloud phone systems solution gives IT directors and facilities management staff the opportunity to focus on important site issues, rather than worrying about telephone system availability.

Today's budgets are tight, and, more than ever, IT decision makers are concerned with the financial impact of their communications solutions.

Cloud phone systems can often deliver the greatest return for telecommunications budgets.

Tables 1-3 below compare the costs of a premise-based telephone system with that of a cloud phone system. The analysis assumes a company size of 20 employees, the average number of minutes per user is 1,000 combined inbound and outbound minutes and the cost of the premise-based PBX is amortized over a four-year period.

**Typical Monthly Costs of a Premise-Based Phone System – Table 1**

<b>Number of Users</b>	<b>20</b>
<b>Landlines</b>	
Cost per land line	\$50.00
Users per land line	2
Number of land lines required	10
<b>Monthly Cost of land lines</b>	<b>\$500.00</b>
<b>Long Distance</b>	
Average minutes per user	1,000
Total minutes per month	20,000
Long distance rate (per minute)	\$.06
Outbound % of total minutes	50%
Long distance % of total outbound	80%
Long distance minutes	8,000
<b>Monthly cost of long distance</b>	<b>\$480.00</b>
<b>Total Monthly Recurring Costs – excluding cost of PBX</b>	<b>\$980.00</b>
<b>Traditional Premise -Based PBX</b>	
Cost of PBX	\$20,000.00
Monthly cost of PBX	\$416.67
Monthly PBX maintenance and support	\$200.00
<b>Total monthly cost of PBX</b>	<b>\$616.67</b>
<b>Total Monthly Cost</b>	<b>\$1,596.67</b>

**Typical Monthly Costs of Cloud Phone System – Table 2**

<b>Number of Users</b>	<b>20</b>
Cost per user per month	\$25.00
<b>Monthly cost of service</b>	<b>\$500.00</b>
<b>Monthly cost of long distance</b>	<b>None - included</b>
<b>Monthly maintenance cost</b>	<b>None - included</b>
<b>Total Monthly Cost</b>	<b>\$500.00</b>

Comparison – Table 3

<b>Monthly Cloud Savings without PBX Hardware Costs</b>	<b>\$480.00</b>
Savings Percent	49%
<b>Monthly Cloud Savings including PBX Hardware Costs</b>	<b>\$1,096.67</b>
Savings Percent	69%

As can be seen by the numbers above, significant savings can be realized by transitioning from a traditional premise-based PBX to a cloud phone system.

### Low Capital Requirements

Cloud phone systems have very low initial capital requirements, especially if a data network already exists. IP phones are the only capital expenditures necessary in most cases. In comparison, traditional analog PBX and on-premise IP PBX technologies require large capital outlay for switches and/or servers, the required phones and expensive maintenance and licensing contracts. For this reason, many institutions decide to avoid up front capital-intensive solutions and utilize a cloud phone systems provider.

### Standards-Based Equipment

The equipment necessary for cloud phone systems 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 as equipment options are available from a variety of vendors, typically reducing costs. By contrast, on-premise IP or analog PBX solutions typically have proprietary equipment that can only be used with that 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.

### Unified Communications

Cloud phone system providers offer organizations the opportunity to unify their communication tools and mediums. Voice mail message audio files or transcribed text can be forwarded to one or more users via email, users can place calls from a telephone desk set, a computer or a smartphone, etc. Additionally, IP Fax services can be integrated with the cloud phone systems, eliminating the need for analog, paper-based fax machines.

### Low Risk of Obsolescence

Technology changes at a rapid pace, and it is common for equipment to become obsolete quickly. Cloud phone systems 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 cloud phone system provider since they own and manage the voice infrastructure. Third, cloud phone systems allow enterprises 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 and Data Connections

Enterprises using traditional PBX/Key systems utilize two separate communications paths—one for voice and another for data. After migrating to either on-premise IP PBX or cloud phone systems, traditional PSTN circuits can be dropped, reducing recurring costs to the enterprise.

## Utilize Stranded Capacity

In many circumstances, converging voice and data can assist in eliminating “stranded” capacity—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 and result in lower overall telecommunications costs.

## Internal Cable Infrastructure

Existing voice and data networks are typically separate when traditional PBX/Key systems are in place. Voice is transported over traditional Cat 3 while data is on an IP network. Enterprises can consolidate and transmit both voice and data over a single physical network and 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.

## 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. Cloud phone systems simplify this process, allowing these changes to be quickly and easily performed by the enterprise administrator

through a web-based interface. Many changes can be accomplished by end-users themselves. MACs in a cloud phone systems environment take just seconds, are completed in real-time and do not require any budget expenditure.

## Predictable Monthly Expenses

Cloud phone systems 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 often 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. Cloud phone systems services allow enterprises 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.

## Greater Reliability

The ability to communicate is a critical element of success. For this reason, voice reliability cannot be compromised. Cloud phone systems have been engineered with this in mind. In fact, cloud phone systems have distinct reliability advantages over both traditional voice and on-premises IP PBX services, for which single points of failure will interrupt the enterprise’s phone communications.

First, cloud phone system providers often utilize geo-redundant data centers to provide fault tolerance and ensure reliability. With geo-redundancy, the provider utilizes data centers in different locations to ensure continued service if a data center or the equipment located in a data center fails or is damaged. If a data center in which the equipment

located in the data center is damaged or should fail, calls will simply be rerouted through the next data center.

The location of the servers for a cloud phone system is another critical feature. Service provider points of presence (POPs) are secure data center facilities built to withstand more than traditional office buildings. For this reason, servers in a secure data centers have a higher chance of surviving a disaster and maintaining service than a PBX sitting in an enterprise's office. Even if an enterprise's location is destroyed by a disaster, users will have phone service and the ability to access menus, voice mail and other phone system functionality

### **Disaster Recovery**

Users of cloud phone systems have a variety of disaster recovery options. In the event of fire, severe weather or even a simple failure of power or their internet connections, users can reroute all calls to wireless numbers, a home phone or a third-party answering service. 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 cloud phone system. Additionally, some cloud phone providers provide smartphone or desktop apps that can enable uninterrupted use of the cloud system using cellular carrier transport.

### **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 problem. Given the importance of communication, this creates a large burden on the enterprise to be prepared for the unexpected.

In contrast, cloud phone systems relieve 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.

### **Enhanced Productivity**

Cloud phone systems enable 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 cloud phone systems, these productivity-enhancing items are what organizations learn to leverage, appreciate and eventually depend upon for daily operations.

### **Cohesive Services for Distributed Workforces**

Cloud phone systems services break down the boundaries associated with traditional telephone service. Since traffic can be routed to any location connected to the internet, functions that used to be tied to a 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, on a variety of devices.

Likewise, functional groups can office in various locations and use extension dialing-saving the enterprise money previously spent on inter-office communications.

And, employees of enterprises where hoteling or hot desking is practiced can turn any desk set into their own extension with a simple "star" command on the phone.

## Support for Remote Users

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

Cloud phone systems enable 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.
- Users of providers who provide smartphone or desktop apps can operate as if they were still in the office, regardless of their location

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 cloud phone systems 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-premise 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 enterprise to perform these maintenance tasks.

## Smartphone and Desktop Integration and Apps

Few legacy phone systems allow integration with desktop and mobile productivity tools. Cloud phone systems applications allow employees with a browser-enabled smart-phone to access their end user portals. Users of cloud phone system providers with smartphone or desktop apps can place calls from these devices, maintaining their work identity, and remain readily accessible to clients and coworkers and can enable/disable call routing functions and features for their extension. Employees with traditional, non-smartphones, 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

Cloud phone systems technology offers end users and enterprises significant new features that can greatly enhance their productivity and streamline business processes. Among enhanced features enabled by IP-based voice solutions are the following:

**Unified messaging.** Cloud phone systems 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 may be included at no additional charge with cloud phone systems.

**Auto-attendant.** An organization using a cloud phone systems 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.

## Conclusion

Cloud phone systems introduce 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 cloud phone systems 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 cloud phone systems solutions. Cloud phone systems substantially reduce the complexity of system installation, configuration, upgrades and maintenance by shifting the burden from the customer to the cloud phone systems provider while providing a greater feature set and enabling mobility. An ever-increasing number of organizations are evaluating and implementing cloud phone systems as a means of lowering costs and increasing productivity.

## About RingGenius

RingGenius is a full-featured cloud phone system service that includes unlimited calling in the US and Canada at very economical rates, with a mobile app and a web app that provides unified communications and mobility.



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