



White Paper

Calculating the Real Cost of a Business Phone System

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How cloud phone systems eliminate the many hidden costs of an on-premise PBX

Most IT professionals understand that the biggest problems with on-premise PBX systems revolve around manageability, flexibility, and cost. But when the time comes to replace a legacy system, the CFO, CIO or controller may look first at the basic cost of getting a new system up and running. A new PBX or IP PBX typically has a price tag in the tens of thousands of dollars. If you require multiple pieces of hardware to support branch satellite locations, or additional network upgrades, such as digital switches, the costs can easily mount into hundreds of thousands of dollars.

However, even those large numbers may not tell the whole story. As you consider replacing your current system, have you assessed the real costs of your business communications? Due to the siloed nature of the typical premises-based system, you may have never had complete visibility into the total costs.

This white paper provides an analysis of the large yet easily overlooked costs of a premises-based phone system. It will also detail how moving to a hosted Voice over Internet Protocol (VoIP) system, also known as cloud VoIP, can offer dramatic savings compared to on-premise PBX.

Total cost of ownership: more than meets the eye

The most obvious outlays for an on-premises phone system are the ones you can see and touch—the PBX hardware and the phones that connect to it. At an average cost of \$1,000 per employee, the PBX easily stands out as the big-ticket item. However, once you begin to probe below the surface, you may be surprised to find that the hidden costs of an on-premise phone system are nontrivial, making your total cost of ownership (TCO) greater than your original expectations. In fact, the costs may total more than the large initial capital expense of the basic hardware.

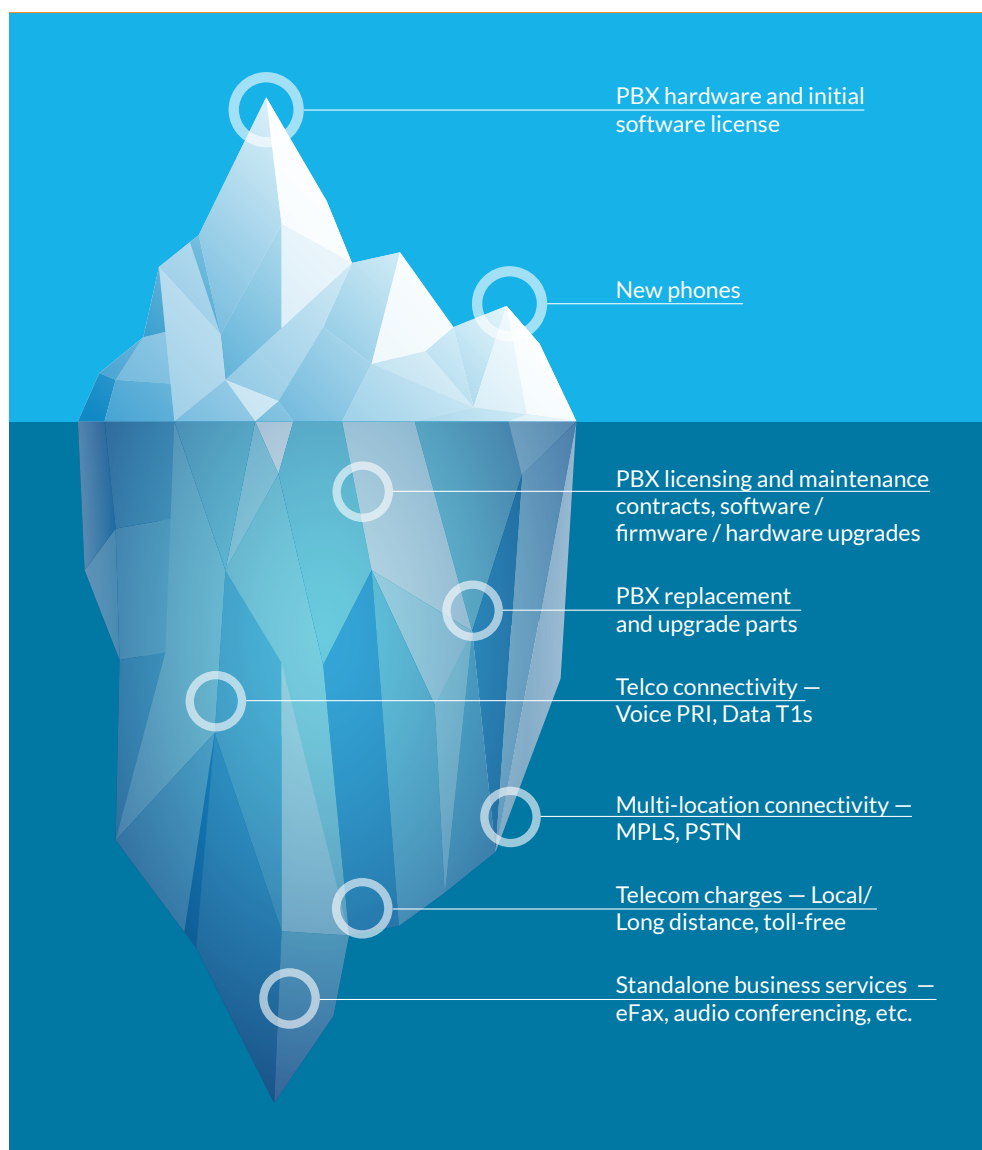


Figure 1. Many costs of a typical phone system lurk below the surface.

Breaking down the top 5 hidden costs

Looking at the details in Figure 1 above, you can see the larger story is not just about the PBX and phones. Many companies are surprised to find that these obvious components of a business phone system are not the largest contributors to the overall cost. A careful cost roll-up analysis typically uncovers the following:

1 PBXs require upgrades, maintenance and trained resources

Network upgrades, license fees, installation, and separate building wiring can quickly add up to a surprisingly large number. In addition, as PBX systems continue to add functionality, they increasingly require highly trained support personnel to maintain the hardware and software, roll out system upgrades, and manage system use.

2 Telecom costs can be large enough to strain the IT budget

Obviously you need PRIs, bonded T1s, or other trunk lines to connect the PBX in your building to the local telco. Line items for local, long distance, and 800 calling are also well known. However, more deeply hidden costs include the need to overprovision phone lines, and then continue paying for them.

3 Standalone services accumulate significant charges

Costs for conference calling, video conferencing and web meetings through third-party vendors add up to substantial line items. Or, you may find costs for services such as eFax that individual business units, managers, or employees have signed up for over time. And these charges are often applied on a per-minute basis, which can make budgeting for these bills unpredictable.

4 Connecting locations adds cost and complexity

The need for MPLS, PSTN, or other business exchange lines to meet the demands of bandwidth-intensive communications between two sites, or among multiple sites, causes IT headaches and budget issues. And the presence of a disparate patchwork of hardware, such as PBXs from different makers across satellite locations can become a management nightmare. For example, if you have multiple locations, you may need additional IT resources to manage not only the connectivity but also the added PBX hardware.

5 Poor predictability of costs and feature availability—now and in the future

With a premises-based solution, each feature, service or maintenance agreement can become an added cost to be negotiated. This lack of system future proofing is a looming TCO issue for any company considering a premises-based approach. An all-inclusive cloud solution like RingCentral Office® not only includes the basic and advanced aspects of a modern business communications network at one cost, but also continues to deliver the latest innovations and features. These advances are immediately available to all of your employees. Furthermore, the deployment of these features and services all happens in the cloud, handled transparently by RingCentral data center telephony and IT experts.

Real world, real numbers

So now let's look at the complete rolled up costs of a new on-premises phone system. Figure 2 shows the hard costs to deploy a basic business communications system for a hypothetical 200-person company with four locations.

Traditional PBX or IP PBX Premise-Based Phone System Costs					
Cost area	Qty	Unit Cost	One-Time Costs	Annual Subscription Cost	Cost over 5 years
Initial capital outlay					
PBX hardware and initial software license	1	\$53,300	\$53,300		\$53,300
New phones (190 standard, 10 exec, 10 conf rooms)	210	\$150	\$31,500		\$31,500
Recurring costs					
PBX licensing and maintenance contracts, software/firmware/hardware upgrades	1	\$9,061		\$9,061.00	\$45,305
Telco connectivity: Voice PRI (2.25 TTL)	2.25	\$450		\$12,150	\$60,750
Multi-location connectivity: MPLSs, PSTN	3	\$350		\$12,600	\$63,000
Telecom charges: Local/Long Distance	210	\$8		\$20,160	\$100,800
Standalone: eFax	200	\$8		\$19,200	\$96,000
Standalone: Audio Conferencing	200	\$10		\$24,000	\$120,000
Total Competitor On-Premise			\$84,800	\$97,171	\$485,855

Less-visible costs often dwarf the upfront capital expense of the PBX hardware.

Over a 60-month life of a phone system, the cost for connectivity and bandwidth between locations alone can exceed the original price tag of the PBX.

Added charges for standalone services like eFax, web meetings, and audio conferencing often constitute significant line items.

RingCentral System Costs					
Cost area	Qty	Unit Cost	One-Time Costs	Annual Subscription Cost	Cost over 5 years
Monthly Service	210	\$19.99		\$50,375	\$251,874
Phones	210	\$150	\$31,500		
Total RingCentral			\$31,500	\$50,375	\$251,874

Total competitor over 5 year: **\$570,655**

Total RingCentral over 5 years: **\$251,874**

Difference

\$287,281

SAVE 50%

Figure 2. Sample costs for a company with 200 employees using phones, four locations, five additional phones, 50 mobile employees, 25 people working from remote/home offices, and dedicated lines connecting all four locations (three lines connected to the corporate office).

Like many businesses, this hypothetical company may be experiencing:

- Rapid business growth such as projecting to add two new locations and 30 employees this year.
- Seasonal fluctuations in employees or use of temps requiring many add/change orders to add new lines/phone numbers, and then scaling back in down periods.
- Skyrocketing conference calling costs from business surges, which IT cannot easily control due to pricing models from the provider.
- The need to unify communication, integrating everything from remote offices to mobile and remote workers, as well as consolidating disparate standalone business services such as online fax and video conferencing.

Although a phone system is essential to any business, its costs are not typically high profile. In fact, in many companies, management may have never seen these costs rolled up in one place. Nonetheless, the sample numbers shown here—large as they are—only account for the basic system; they do not even include conference calling. When you add in the many hidden costs of an on-premises system, the total number may give management a real eye-opening experience.

How do cloud phone systems compare?

A cloud phone solution like RingCentral Office completely changes not only the business communication paradigm, but also the cost structure of both hard costs and soft costs. In fact, beyond eliminating the upfront expense of the PBX hardware, many of the line items in Figure 2 simply disappear. Let's look at some of the hard cost savings.

- **Lower multi-site management costs** – Any IT person can add phones or numbers, make changes, or handle moves from a web interface.
- **Reduced IT maintenance and infrastructure** – All handled in the cloud by the service provider, eliminating operational expenses and IT distraction.
- **Elimination of many telco costs** – Does away with line items ranging from PRIs to switches as all voice and UC traffic travels over the Internet.
- **Lower IT service provider costs for ongoing updates** – RingCentral handles updates and also provides continuous improvements and innovations.
- **Increased worker productivity** – New capabilities such as direct extension dialing and the ability to forward calls and faxes to mobile phones makes workers more effective. The provider also handles integrations with leading CRM systems like Salesforce and Microsoft business apps.

- **Reduced capex** – Simply rent phones and gain the flexibility to upgrade to latest models.
- **Decreased cost of supporting a mobile workforce** – The unique RingCentral mobile app—which enables you to turn a smartphone into a VoIP office phone—saves carrier costs, especially for conference calling, video meetings, and when travelling internationally.

Additionally, there is a misconception that with a cloud phone system, you still require costly MPLS, PRI, or PSTN leased lines to connect multiple locations to each other. On the contrary, all these costs go away since interoffice calls travel over the Internet backbone. You incur no costs for this connectivity except, if you don't have one already, you may need a router with failover capability.

The cost of moves, adds, and changes also becomes negligible since any IT person can almost instantly handle the reconfiguration from a simple web interface. There is no time-consuming reconfiguration on the physical hardware, no new cards to buy, no requirement for training or certification, and no travel costs to support a remote location.

One of the bigger cost savings noted by RingCentral customers is eliminating many of your existing standalone Unified Communications (UC) costs—from web meetings and video conferencing to employees receiving faxes on their phones or PCs. These business services are included in the RingCentral cloud phone system.

How will you save, and how much?

Each business case is different. Without TCO calculations, it is hard to estimate exactly how much hosted VoIP will save you after accounting for the monthly charges. For many companies, these cost savings can amount to 30% to 70% or even higher compared with a premises-based PBX system. For example, some companies may have numerous locations, each with its own PBX hardware, plus the need to support home offices and mobile workers. In a case like this, the company could save hundreds of thousands of dollars by going to cloud VoIP (Cloud).

In addition to the hard cost savings offered by the cloud, your business will certainly enjoy cost savings and other business benefits in increased productivity, better collaboration, and less distraction of IT staff.

Summary

These cost savings and benefits (combined with flexibility and manageability) explain the rapid adoption of hosted VoIP by businesses of all sizes—from small businesses with one location to a geographically diverse enterprise of 1,000 employees or more. Cloud phone solutions allow you to move your business communications to the cloud and benefit in the same way you are reducing costs, and operational expenses by moving other critical business applications to the cloud.

Perhaps more important, a cloud phone solution like RingCentral Office eliminates IT and budget risks by removing the element of surprise associated with IP PBX roll-outs, such as the potential need to upgrade your network core. It also reduces future risks because, in addition to cutting your costs now, it can eliminate hidden future costs as you grow—whether they are new features, a telecom server at a new location, or the need to add new lines or cards when you onboard new employees.

When you consider the business advantages—such as integrating your entire workforce, including remote and mobile workers—your company may find even further cost savings.

Related documents

1. [7 Business Benefits of Moving from an On-premise PBX to a Cloud Phone System](#)
 2. [A Guide to Assessing the Network Benefits and Requirements of Cloud VoIP](#)
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BYOD (Bring Your Own Device)

CRM (Customer Relationship Management) is a set of technologies and tools used to manage, improve, or facilitate sales, support and related interactions with customers, prospects, and business partners.

Five 9s reliability refers to a high standard (99.9995%) for the desired availability of a system. It is equivalent to approximately 5 minutes of downtime—planned or unplanned—in a given year.

PBX (Private Branch eXchange) is private telephone system that switches calls between business users on local lines while allowing all users to share a certain number of external phone lines.

IP PBX (Internet Protocol Private Branch eXchange) is a private business telephone system that provides functionality similar to PBX, but over data networks like a LAN or WAN rather than traditional circuit-switched networks. IP PBX typically can switch calls between VoIP on local lines or between VoIP and traditional telephone users.

MPLS (Multi-Protocol Label Switching) is a packet data transport service that uses a high-speed switching architecture rather than the typical routers seen in most IP networks. It transmits calls across a telco service provider's network in a cloud-like connection between the business customer's locations.

PRI (Primary Rate Interface) circuits are phone lines based the Integrated Services Digital Network (ISDN) standard used for carrying multiple voice calls and/or data transmissions between two physical locations.

VoIP (Voice over Internet Protocol) uses the language of the Internet to place and transmit telephone calls over an IP network rather than the traditional public switched telephone network (PSTN).

About RingCentral

Since 2003, **RingCentral** has been breaking down the communication barriers created by complex on-premise hardware. RingCentral's cloud phone system delivers business communications solutions that free people to work the way they want in today's mobile, distributed and always-on work world. Delivered on a state-of-the-art cloud infrastructure, RingCentral helps more than 300,000 customers thrive in a new world of work. [Learn why.](#)