

WHITEPAPER

HOSTED VS. ON-PREMISE PBX

A COMPARISON OF DIRECT COSTS & INDIRECT BENEFITS

The adoption of Voice over Internet Protocol (VoIP) solutions across the world and within Canada continues to rise. According to a recent study from Reportstack, the VoIP market is expected to experience a compound annual growth rate of 6.46 per cent until 2016, and VoIP continues to be one of the fastest growth areas within Canada.

A recent Canadian Hosted PBX market report from NBI/Michael Sone Associates estimates a total of 37,099 active hosted phone system users in Canada at the end of 2011 with an anticipated 81,760 seats in 2013—an increase of 50.7%!

One of the primary drivers of growth in this market is the fact that VoIP technology has progressed to offer quality of service guarantees and management tools to help businesses ensure that their mission critical business communications are maintained in an up state. In addition, more businesses are gaining access to broadband connections at much lower rates and higher speeds. These combined changes have made VoIP a preferred solution over traditional telephony.

Another key contributor to the trend is the reduced expenditure associated with the technology. Businesses are able to provide a smaller outlay than before and still enjoy the benefits of VoIP solutions—whether they have 5

employees or over 1,000. In these difficult economic times, that is sure to be a significant factor and one that could persuade many businesses to adopt the system.

With many businesses considering a change to their phone system, a key decision is often whether to go with a hosted or a premise-based system. However, as VoIP technologies evolve, businesses continue to struggle with which solutions to choose. And with the average business expecting its next phone system to last at least six years, organizations should be taking a comprehensive look at costs across the entire lifecycle of their phone system—from immediate to long-term costs.

In this whitepaper, we use a real business scenario to compare the upfront and recurring costs of both a hosted and an on-premise phone system to demonstrate the lower cost of ownership of a hosted phone solution. We'll also explore many of the indirect benefits that a hosted scenario offers over a premise-based scenario such as flexibility, scalability and built-in disaster recovery planning.

In the end, we'll see that the many significant benefits and advantages of the hosted scenario far outweigh any potential value in implementing an on premise-based phone solution.

UPFRONT COSTS COMPARISON

The upfront costs to consider when comparing on-premise and hosted PBX solutions include both capital costs and deployment costs.

CAPITAL COSTS

Capital costs include all the hardware, software and licences that are typically included in a quote from a vendor. Businesses should determine how many phones are required for an initial and a final deployment, since purchasing more phones upfront in anticipation of future requirements may significantly decrease subsequent deployment costs.

DEPLOYMENT COSTS

The time it takes to provision a phone, the cost to have it installed, the time it takes to have employees trained and brought fully up to speed, and assigning an employee to troubleshoot the set-up all contribute to deployment costs. Premise-based systems may be installed by a 3rd party, but generally those are additional costs paid up front or rolled into a long-term service agreement. If a 3rd party is not installing the equipment then it is fully the responsibility of the IT team to manage the deployment including all hardware and software programming.

The biggest benefit of the hosted approach is its low upfront cost—making it an ideal choice for small to mid-sized businesses. In our real Total Cost of Ownership (TCO) customer scenario of 76 seats (Figure 3), the initial upfront implementation cost for the hosted model is \$35,071, (compared to \$95,209 for the on-premise system). With the hosted implementation cost being almost a third of the cost of an on-premise system, it's an ideal choice for businesses without immediate access to capital. The only potential capital expense required to get started is IP phones for your employees (but they can be rented as well).

ON-PREMISE	HOSTED
Upfront Costs	
Upfront capital required (hardware/software)	Low monthly subscription
Deployment/training costs	Training included

Fig. 1 = Upfront Cost Examples



RECURRING COSTS COMPARISON

Recurring costs arise as a result of the company needing to support its phone system on an ongoing basis. Recurring costs are often less visible than capital or deployment costs, for example, and are sometimes hidden altogether.

When choosing an on-premise phone system, you can incur the following:

MAINTENANCE CONTRACTS

Premise-based systems typically require maintenance contracts that add significantly to the total cost of ownership. Configuring remote users can also be somewhat complicated and therefore, expensive. **With a hosted PBX, there is no maintenance contract required.**

SOFTWARE ASSURANCE

An on-premise phone system needs to be kept up to date with the latest software in order for the maintenance agreement to remain valid, so additional software upgrade costs may be incurred along the way. **With a hosted phone solution, all maintenance requirements, including automatic software upgrades, are included as part of the single monthly subscription fee.** Since hosted phone systems are cloud-based, this means the software updates are completed within the service provider's cloud environment and either remotely pushed to end-users or visible upon next log-in to applications..

SERVICE ORDERS

For major repairs and maintenance of premise-based equipment, a Service Order is required with 3rd parties or system manufacturers. These are often above and beyond standard maintenance agreements and could be charged on a per hour basis. **With a hosted PBX, there are no charges for service order requests and there's often a team of dedicated specialists assigned to your account to support your system needs.**

LABOUR ASSOCIATED WITH ONGOING SYSTEM MANAGEMENT

Labour costs for on-premise phone systems are often overlooked. Someone has to be available at virtually all times to make sure the system is running right. Someone also has to maintain and upgrade the software on a regular basis, and report and manage problems. Though these individuals may remain in the business without an on-premise system, their time allocation must be taken into consideration, as this time could be allocated to other projects.

With a hosted phone system, you get a fully-managed service. Not to mention the fact that the equipment delivering your hosted service is enterprise-grade regardless of the size of your business, ensuring the best quality.

TRAINING & CERTIFICATION COSTS

Every on-premise phone system requires employees who deploy and manage the system to be certified on its hardware and software. This requires training programs for initial rollout and for ongoing maintenance. In addition, all users on the system must be trained on how to use the hardware and software as it relates to their role including phone users, administrative staff, management, reception, and call centre staff.

Even if you're talking a tiny fraction (5%) of just one IT employee's time, you're talking about thousands of dollars each year to manage your own PBX. **Part of what you're paying for with a hosted PBX is the outsourcing of this responsibility, so that your IT staff can focus on issues more critical to advancing your business.**

RECURRING PHONE CIRCUIT & LONG-DISTANCE COSTS

On-premise phone systems require connectivity for voice and sometimes data for both inbound and outbound calls to be made. These costs could include setup charges, monthly recurring charges, and usage-based charges. Basic local lines, PRI's, or SIP Trunking with a Data Network Access connection would be required, each incurring a contract commitment. **With a hosted PBX, you don't need separate local lines and PRI's at each location.** You can make nationwide calls by dialing inter-office extensions without incurring long distance charges.

ON-PREMISE	HOSTED
Recurring Costs	
Maintenance contracts	No maintenance
Long-distance charges	No long-distance charges

Fig. 2 = Recurring Cost Examples



ELECTRICITY COSTS

Though all systems require electricity, on-premise phone systems require greater computing power on-site and that drives increased demands for cooling. These two processes drive up increased electricity usage.

Also, premise-based phone systems typically need larger UPS's to run during power outages. With a hosted PBX, your power requirements are minimal. Only your PoE switches and modems/routers need power.

HOSTED PBX PROVIDES A FULLY-MANAGED SOLUTION

The ongoing management of a PBX phone system requires tools, resources and expertise that may not be available in-house. With a hosted PBX, you leverage industry-leading resources and management capabilities for secure and reliable VoIP communications, so you can focus on your business.

WITH A HOSTED PHONE SYSTEM, YOU GET:

- Streamlined services – You can combine maintenance of your voice and data solutions.
- One person to call – Managed service providers normally assign a specific service specialist to your account. This representative is responsible to oversee your account and make sure your system is properly maintained and serviced.
- Service problems handled remotely – In cases where a technician is required to come to your location, the managed services provider is responsible for clearing the trouble from start to finish.

TOTAL COST OF OWNERSHIP EXAMPLE

HOSTED SOLUTION REDUCES TOTAL COST OF OWNERSHIP (TCO) BY OVER 50%

In Figure 3, we've taken a real customer scenario to illustrate several areas of potential cost savings between a hosted IP telephony solution and a premise-based phone solution. Here, we use the example of a business with 76 seats/users. This sample calculation illustrates the cost differences in the following areas:

- Upfront Costs : Equipment & installation costs
- Recurring Costs: Operations & administration costs, network access & toll charges, and human resources for planning/management

ON-PREMISE VS. HOSTED TELEPHONY – SAMPLE COST ANALYSIS (HARDWARE PURCHASE MODEL)

On-Premise Scenario 'UNMANAGED SOLUTION'

A premise-based solution where the technology is residing at your premises. You can own the technology but you also have an IT department to manage the solution for you.

Hosted Scenario 'MANAGED SOLUTION'

A hosted solution where the application is located remotely in a secure Data Center and is distributed through the Internet, requiring no maintenance.

Upfront Costs

Equipment & Installation	1st Yr Total	5-Yr Total	1st Yr Total	5-Yr Total
IP Telephone System/Hosting Fee	\$ 12,074	\$ 0	\$ 0	\$ 136,833
Voicemail	\$ 3,362	\$ 215	\$ 0	\$ 0
Hard Terminals (IP Phones) ¹	\$ 20,488	\$ 0	\$ 450	\$ 0
Soft Terminals (Software Phones)	\$ 0	\$ 0	\$ 22,511	\$ 0
Remote Gateways	\$ 1,770	\$ 0	\$ 0	\$ 0
Training	\$ 4,000	\$ 0	\$ 0	\$ 0
Software Upgrades for IP PBX	\$ 0	\$ 2,442	\$ 0	\$ 0
Software Upgrades for Voicemail	\$ 0	\$ 674	\$ 0	\$ 0
Other Changes	\$ 0	\$ 0	\$ 0	\$ 0
UPFRONT COSTS - SUBTOTAL	\$ 41,694	\$ 3,331	\$ 22,961	\$ 136,833

Upfront implementation costs are lower in the first year, providing greater capital savings. Also, the long term payoff is greater, as substantial savings are realized with significantly fewer recurring costs (see below).

Recurring Costs

Operations & Administration	1st Yr Total	5-Yr Total	1st Yr Total	5-Yr Total
Maintenance Contract ²	\$ 0	\$ 20,111	\$ 0	\$ 2,460
Remote Monitoring Contract (for phone & voicemail)	\$ 0	\$ 10,793	\$ 0	\$ 0
Moves, Adds, Changes, Deletes	\$ 0	\$ 473	\$ 0	\$ 890
Space, Power, HVAC, Insurance	\$ 0	\$ 4,500	\$ 0	\$ 0
SUBTOTAL		\$ 35,877	\$ 0	\$ 3,350
Network Access & Toll Charges				
Access Costs (over multiple locations)	\$ 3,000	\$ 54,000	\$ 0	\$ 0
Toll Charges (domestic & international) ³	\$ 0	\$ 103,856	\$ 0	\$ 40,800
SUBTOTAL	\$ 3,000	\$ 157,856	\$ 0	\$ 40,800
Human Resources				
Planning, Project Mgmt, Design	\$ 50,515	\$ 41,991	\$ 12,110	\$ 5,698
System Admin/Office Mgmt	\$ 0	\$ 60,731	\$ 0	\$ 8,714
Technical Support	\$ 0	\$ 57,847	\$ 0	\$ 2,893
Security Mgmt	\$ 0	\$ 19,531	\$ 0	\$ 2,930
Contingency Planning Mgmt	\$ 0	\$ 16,854	\$ 0	\$ 843
SUBTOTAL	\$ 50,515	\$ 196,954	\$ 12,110	\$ 21,078
RECURRING COSTS - TOTALS	\$ 95,209	\$ 394,018	\$ 35,071	\$ 202,061
5 YEAR TOTAL COST		\$ 489,227		\$ 237,132

Recurring maintenance costs are significantly lower for the hosted solution.

TOTAL SAVINGS WITH HOSTED PBX \$ 252,095

The hosted solution yields a 51.5% savings over the on-premise solution based on a 5 year term.

1. In this Hosted scenario, the customer chose to buy rather than rent the IP phones.

2. Both scenarios assume some growth in the number of users supported by the system over the five years and thus some increase in administration and support costs associated with that growth and, in the on-premise case, increased technical problems as the on-premise system ages.

3. In this multi-location example, toll charges in the hosted scenario are a fraction of what they are for the on-premise case, where there would be inter-location long-distance charges. With a hosted scenario, there are no inter-location long-distance calling charges.

The bottom line of this particular example is that the TCO (i.e., initial costs + 5 years of ongoing expenses) for an on-premise solution was calculated to be \$489,227, while the TCO for an equivalent hosted solution was calculated to be \$237,132. Overall, after a five-year cumulative period, the hosted solution yields a dramatic 51.5% savings (or \$252,095) over the on-premise solution—a savings that can be invested back into the business instead of being tied up in a telephone system!

THE CASE FOR HOSTED PBX

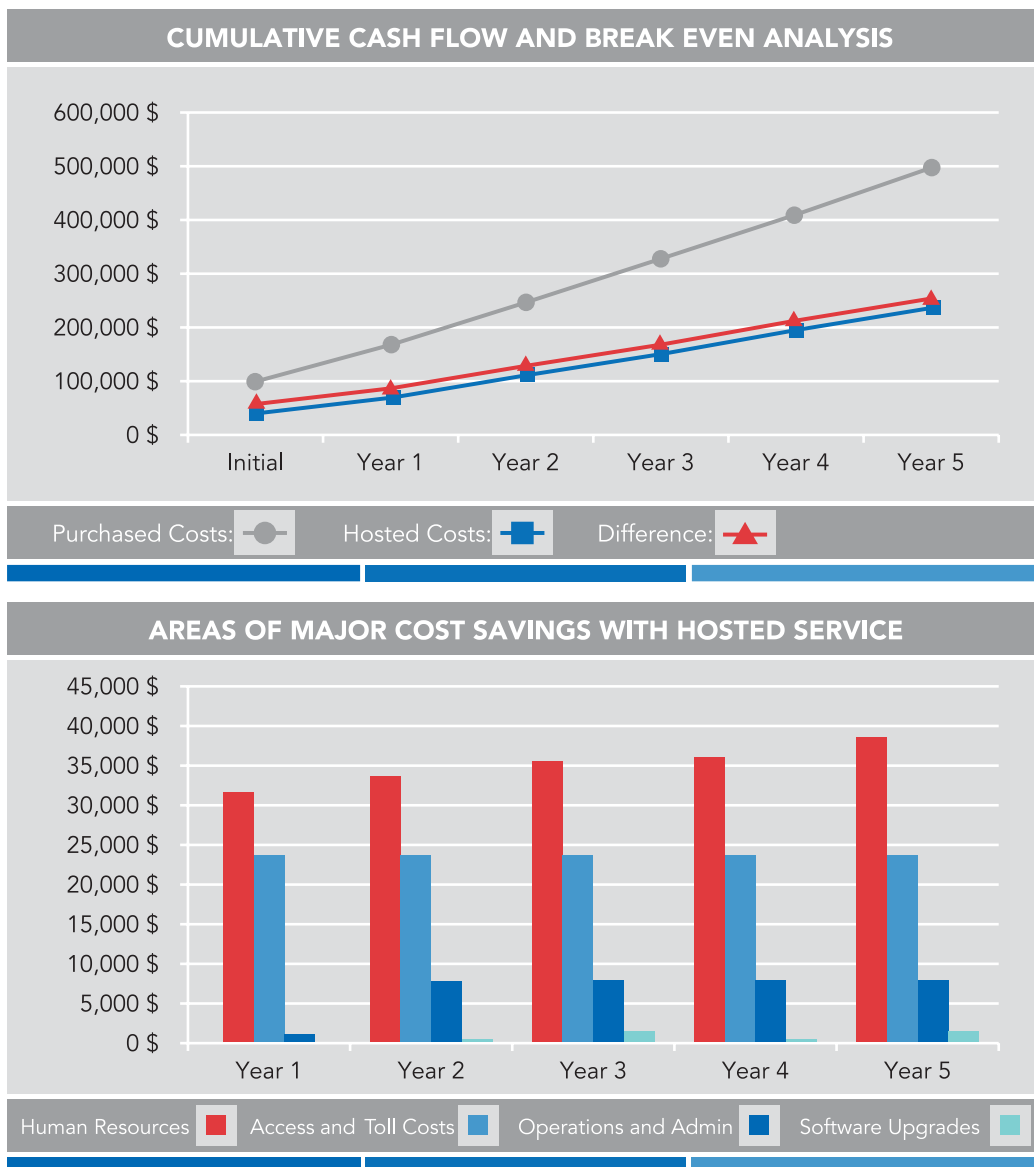
The immediate benefits of a hosted PBX can be significant, including:

- Lower capital cost and ongoing maintenance expenses associated with a single, converged network infrastructure;
- Elimination of increasingly expensive service and support contracts on aging legacy TDM PBX hardware;

- Elimination of long-distance toll charges;
- Greater self-serve capabilities and significantly reduced costs associated with performing telephone moves, adds and changes.

As shown in Figure 3, the TCO for an on-premise solution is relatively high, consisting of both capital expenditures (CAPEX) and ongoing operational expenses (OPEX). On the other hand, hosted IP telephony, which is based primarily on an OPEX financial model, offers a significantly lower TCO plus sophisticated, feature-rich and application-friendly solutions which will be outlined in the next section “Indirect Benefits of a Cloud-Based Phone System”.

Figures 4 and 5 show the substantial savings of a hosted PBX solution over the long-term, the most dramatic being the savings from recurring maintenance costs and toll charges that only a hosted phone system covers.



INDIRECT BENEFITS OF A CLOUD-BASED PHONE SYSTEM

To be all-inclusive, a TCO calculation should incorporate both the obvious 'direct' costs and the not-so-obvious 'indirect' benefits. As you'll see in the examples below, a hosted PBX offers far more flexibility and scalability while ensuring your system stays current.

	ON-PREMISE	HOSTED
Flexibility (i.e., moves, adds, changes, and deletes)	<p>Changes are often complex and require project planning for effective execution and could involve changes and charges by the telephony service provider.</p> <p>Adding locations or integrating a new company that has been purchased is often cost prohibitive as different phone systems won't integrate and multi-location systems need to be purchased from the outset, therefore requiring a completely new phone system.</p>	<p>Changes are completed with a simple call to your service provider or online via access portals (available with most service providers today) which helps you respond to customer demands and competitive actions such as a promotional marketing campaign.</p> <p>A call centre capability, or a new campaign queue, can be added quickly and easily, or an auto-attendant can be scaled rapidly to improve customer support and the customer experience.</p>
Scalability (Ability to scale up or down as business demands change)	<p>On-premise solutions are designed for a fixed number of users usually in 8, 24, or 100 increments. From a capacity perspective, before a system is bought, businesses in growth mode have to guess the size of their business over the next 10+ years and often need to "oversize" their PBX to ensure they have excess capacity (which requires more upfront capital).</p> <p>If your business grows beyond the scale of your phone system, you'll need to buy an entirely new one for your business which could cost in the 10s to 100s of thousands of dollars.</p>	<p>A hosted PBX service can be scaled up or down almost instantly by the business customer, usually through some form of self-serve web portal offered by the hosting provider, one user, one phone line or one feature at a time, if that's what the business needs, and most often without requiring an on-site visit by a technician.</p> <p>Scaling up or down is seamless and the business only pays for the services it actually uses, so there are no unused lines running up unnecessary expenses.</p>
Telephony Circuits	<p>The customer is responsible for ensuring that the right types of circuits get installed in the right places to support all necessary connections.</p>	<p>The service provider brings in the necessary circuits and manages the installation and configuration on the customer's behalf.</p>
Spare Parts Management	<p>Having an on-premise phone system brings with it the management effort and cost of maintaining an inventory of spare parts to support ongoing maintenance requirements, or requires having an active agreement in place with a third-party break/fix service to handle necessary parts sparing.</p>	<p>In a hosted scenario, all hardware and software maintenance, including spare parts management, is handled by the hosting provider and requires no customer involvement.</p>

	ON-PREMISE	HOSTED
Training/Certification	A business choosing an on-premise phone system must either pay a third-party "interconnect" or reseller firm that is certified by the appropriate equipment vendors to install, manage, monitor and maintain its system and connections or pay to have members of its own in-house IT team appropriately trained and qualified as well as ensure ongoing training to maintain necessary vendor certifications.	Certification is always handled by the service provider eliminating this cost completely from your business.
Proper Facilities	<p>A business hosting its own PBX needs to be certain the facility in which it is housed is properly fitted-out for space, power, HVAC and security to ensure proper, reliable and secure operation.</p> <p>This requirement grows acutely as the phone system becomes an increasingly important aspect of business operations, such as through the addition of critical applications or by consolidating and centralizing telephony operations and management company-wide. However, building and maintaining such an environment may be beyond the expertise or budget of most businesses.</p>	With a hosted PBX, equipment is housed in a remote environment, eliminating a business' need to maintain space and facilities.
Technical Expertise	With an on-premise system, IT staff must stay abreast of technology advancements. This includes, staying informed about announcements of changes needed to reduce security risks, as well as staying aware of software releases, upgrades and patches required to stay current and plug potential functionality, performance and security holes. Such upgrades may also require corresponding hardware upgrades and even reacting to end-of-life announcements by seeking out suitable replacement products.	In a hosted scenario, the service provider will ensure that infrastructure is continually upgraded and refreshed to optimize efficiency, performance and reliability.

Other 'soft' benefits of implementing a hosted PBX that aren't so visible in a straightforward TCO comparison include:

- Increased communications integration for organizations with multiple locations, mobile sales and service staff, and at-home or remote workers.
- Improved employee productivity through the use of desktop multimedia communications and collaboration tools.
- Staff is freed from location constraints, giving them 'anywhere' access to information and company resources -the most important of the indirect benefits is the ability to route calls to any phone, anywhere in the world, rather than just to phones wired directly to the PBX inside an office environment.

HOSTED PBX ENABLES FUTURE SCALABILITY & COMPATIBILITY

Add-On Services

In addition to all of the indirect benefits for hosted PBX listed above, substantial differentiation exists between on-premise and hosted systems when it comes to larger, more sophisticated applications layered on top of a basic phone system, such as Call Centre. Some premise-based systems simply cannot scale to support an application like Call Centre - a larger, more complex and thus more expensive phone system would have been needed from the outset. With a hosted PBX, it's much easier and far more cost effective to add on additional applications like Call Centre.

Built-In Disaster Recovery Planning

Significant advantages exist with a hosted PBX system when it comes to managing phone system uptime in the face of occasional failures. If a failure occurs with an on-premise PBX or in the data access connection - an inbound caller (potentially the customer's customer) will either get a busy signal or, worse yet, a ring-no-answer. To the caller, it will certainly seem that something is wrong - either the company is not able to answer the telephones or perhaps the company has gone out of business. With a hosted telephony solution, this risk is dramatically reduced as an infrastructure failure would have little noticeable impact on the caller's telephone interaction with the company. In effect, the company still appears to be 'active' and the caller can still terminate the call properly by leaving a voicemail.

HOSTED PBX SOLUTION COMES OUT ON TOP

When reviewing all of the costs of hosted and on-premise PBX solutions, the evidence is clear that a hosted PBX will provide greater short-term savings—yielding a savings of 51.5% over the on-premise solution based on a 5 year term! Plus, you benefit from all of the indirect benefits like built-in disaster recovery, which you know you'll be able to rely on in the event of a disaster. Not to mention having the peace of

mind knowing you've saved money and invested in a system that is flexible, scalable and nimble enough to adapt to changing business needs.

Highlights of a hosted solution that contribute to lower cost and to a more attractive financial picture overall include:

- No equipment to buy, so no upfront capital expenditure required¹
- Minimal internal staff effort required during implementation, configuration & testing
- No need to keep internal IT staff equipment-trained/certified
- Hosting provider handles ongoing maintenance or support requirements
- Hosting provider handles moves/adds/changes
- Hosting provider handles infrastructure patches, upgrades, refresh
- Hosting provider handles all hardware/software requirements for new/additional features
- Hosting infrastructure continually kept up to date and phones can be refreshed after each contract term
- Predictable, flat monthly hosting fee simplifies budgeting

With functionality residing in software, IP telephony reduces the complexity required to deliver new capabilities that are extremely difficult, if not impossible, to achieve in the legacy telephony environment. In some cases, these new capabilities drive top-level business benefits such as increased revenue, enhanced customer satisfaction, and a stronger competitive differentiation. In virtually all cases, these capabilities drive improved communications, increased user and IT staff productivity, cost savings and greater operational resilience.

We encourage businesses evaluating different systems to familiarize themselves with the contents of this whitepaper. You can also consult with Primus Business Services by visiting www.primusbusiness.ca or by calling us toll-free at 1-888-411-6073.

Visit primusbusiness.ca or call 1-888-411-6073 to learn more.

¹ Note: some companies choose to buy the IP phones to use available capital and lower the monthly hosting subscription fee.