# ZANTEK™

Cloud-Hosted vs. On-Premise PBX Business Phone Solutions

1. **Our Story**

Founded in 1993, Zantek is committed to helping customers solve business issues through the effective use of technology. Through a national coast-to-coast distribution network, Zantek offers innovative voice solutions to help customers achieve more.

With its headquarters in Winnipeg, Zantek offers Hosted Cloud PBX (ucaas - Unified Communications as a Service), Hosted Call/Contact Center (CCaaS - Contact Center as a Service), Cloud Video Surveillance as a Service (vsaaS), Internet Fax, and SIP Trunking applications.

A national redundant network brings purely Canadian network based geographical redundancy through switches and equipment in Vancouver, Calgary, Ottawa and Montreal.

Diagram: Geographically Redundant Canadian Network
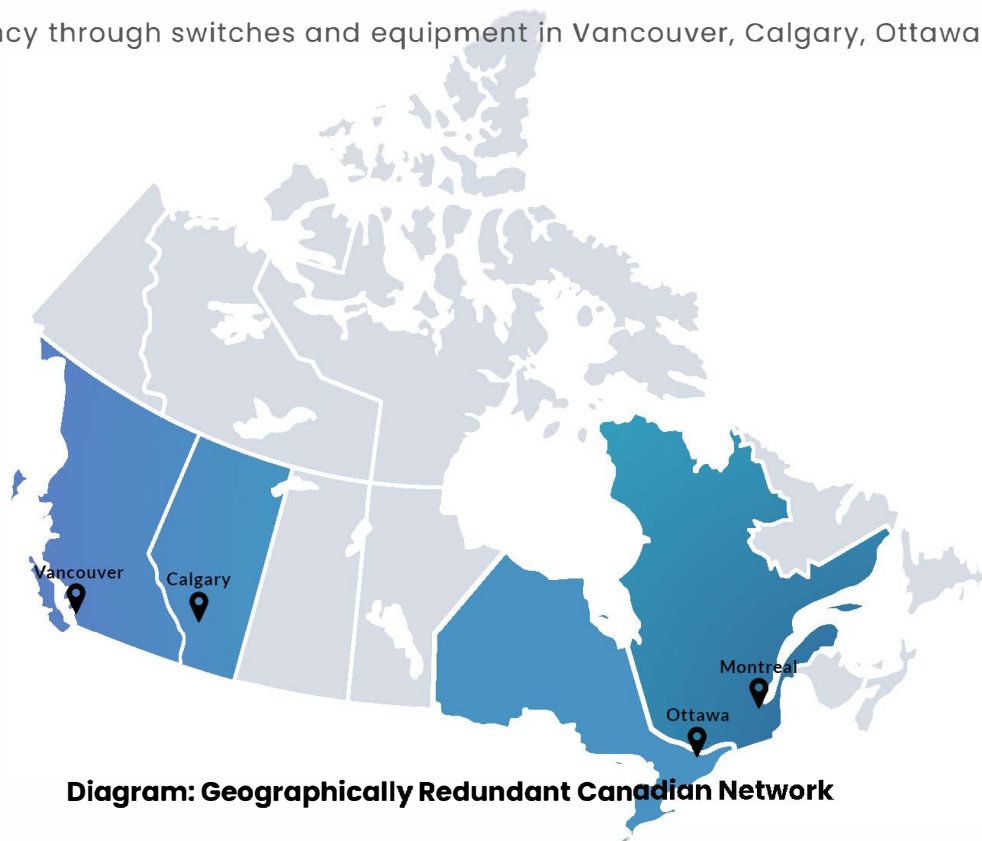
2. Hosted-Cloud Phone System

Also known as Hosted VoIP or Hosted PBX, a cloud-based phone system is one where the service provider is responsible for hosting the IP PBX, as well as providing the technology needed to ensure the service runs smoothly. In short, all the phone's programming is located online instead of maintaining hardware in the office.

The adoption of Voice over Internet Protocol (VoIP) solutions across the world and within Canada continues to rise. Market Research Future has recently published a study with insights for the Internet Telephony market over the next four years, up to 2023. This study showed that the global VoIP market will continue to expand, reaching USD 52 Billion by 2023, at 9% Compound Annual Growth Rate.

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

Another factor to consider is the affordable scalability that VoIP offers. Businesses can 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 economic times, that is surely a significant factor and one that could influence many businesses to adopt the system.

3. Premise-Based Phone System

A PBX (private branch exchange) is a telephone system within an enterprise that switches calls between enterprise users on local lines while allowing all users to share a certain number of external phone lines. The main purpose of a PBX is to save the cost of requiring a line for each user to the telephone company's central office.

The PBX is owned, stored, and operated by the business rather than the telephone company (which may be a supplier or service provider, however). Private branch exchanges used analog technology originally. Today, PBXs use digital technology (digital signals are converted to analog for outside calls on the local loop using plain old telephone service (POTS).

Traditional PBX phone systems use landline copper-based telephone lines that enter a business' premises where they are connected to a PBX box. That box contains telephony switches that allows calls to be distributed to different phones in an office and to allow those phones to access a limited number of outside lines (trunk lines).

An IP PBX uses digital phone signals, rather than analog landlines, to send calls. Because you can use Ethernet cables to connect your phones instead of traditional phone ones, no rewiring is needed. IP PBX systems can also be hosted by management service providers. While hosted systems require monthly fees, there are fewer end-user hardware costs associated with its use. Smaller PBX systems, often referred to as virtual PBXs, offer hosted service but with fewer features.
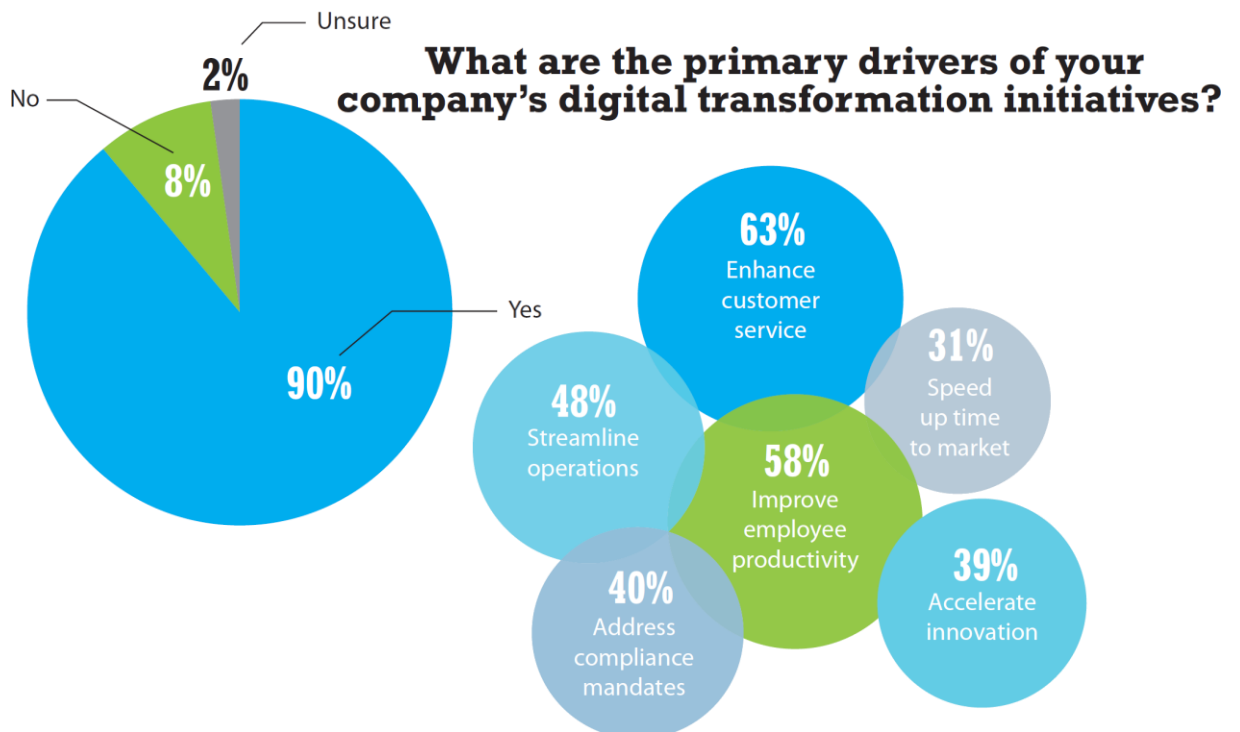
A business that wishes to host their own PBX system will have a considerable outlay in both capital equipment (new phones) and time (training the IT staff to install and manage the system) as well as the cost of the PBX hardware itself. Furthermore, unlike a cloud-based system if there is a power or phone line outage there is no failover to circumvent the downtime.

4. Digital Transformation

Historically, sustaining market leadership was based on having the best product, the lowest prices or the best people. Today, this is no longer the case. Although these factors are still important, in the digital business era, maintaining a competitive advantage is tied to an organization's ability to recognize shifts in the market and respond quickly. Those that can accomplish this will thrive, while those that can't will quickly fall behind and struggle to survive—and many will fail to exist in a few short years.

The increased speed that determines digital success is fueled by business agility, which requires a highly dynamic and agile IT foundation. This has caused companies to adopt new technologies such as containers, virtualization, flash storage and software-defined networking. However, the one technology that should be considered the foundation for digital transformation is communications as it is at the heart of digital initiatives.

Does your organization currently have a digital transformation initiative underway?

Unsure 2%

No 8%

Yes 90%

What are the primary drivers of your company's digital transformation initiatives?

63% Enhance customer service

31% Speed up time to market

48% Streamline operations

58% Improve employee productivity

39% Accelerate innovation

40% Address compliance mandates

ZK Research 2019 IT Priorities Survey

5. Cost Comparison

Startup Cost Comparison

When considering upfront costs with Cloud-Hosted and On-Premise solutions businesses need to consider both capital and deployment costs.

Capital Costs

This entails the hardware, software, and licensing.

Deployment Costs

The time it takes to configure, install, have employees trained and brought up to speed on the system, as well as the technician required to troubleshoot the set-up is all related to deployment costs. Premise-based systems may be installed by a third party. If no third party is installing the equipment, then it is the complete responsibility of the IT team to manage the deployment, including all software and hardware configurations.

The biggest benefit of the hosted approach is the low upfront cost—making it an ideal choice for small to mid-sized businesses. The only potential capital expenses required to get started is IP phones for your employees and possible configuration costs (these can be leased or included in a service agreement as well).

Upfront Costs	
On-Premise	**Cloud-Hosted**
Upfront Capital Required (hardware/software)	Low Monthly Subscription
Deployment/ Training Costs	Training Included

Recurring Cost Comparision

Recurring costs tend to primarily be comprised of upkeep and ongoing service costs such as maintenance and assurance.

Software

On-Premise solutions need to be kept up to date on the latest software due to maintenance agreement validity. This means that additional software upgrade costs may be incurred as time progresses. With a Cloud-Based solution all maintenance and software upgrades are included at no extra cost as part of your monthly subscription.

Maintenance

Maintenance contracts are very common with On-Premise solutions, these significantly increase the cost of ownership. Configuring remote users tends to be complex and expensive. With Cloud-Based solutions there is no maintenance contract required.

Service Orders

When it comes to major maintenance and repairs of On-Premise equipment, a service order is typically required with third parties or system manufacturers. These are often not included in standard maintenance agreements and could come with a billable hourly rate. Cloud-Based solutions perform their own maintenance and repairs to their systems, typically performed with redundancy for minimal downtime.

Labor

Cost of labor for On-Premise solutions is typically overlooked. A technician needs to be available at most if not all times to make sure the system is running without failure. There's maintenance and upgrades to software on a regular basis, as well as reporting and problem management. Although these may be employees within the company which would normally be on shift, their time allocation should also be taken into consideration as their skills could be applied elsewhere. Hosted phone systems are fully managed in the cloud using enterprise-grade equipment which means minimal labor costs.

Training and Certification

Every On-Premise phone system requires employees who deploy and manage the system to be certified on its hardware and software. Additionally, all users on the system need to be trained on how to use the system as it relates to their role including phone users, administrative staff, management, reception, and call center 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. When a business chooses a Cloud-Hosted Solution, they're essentially outsourcing those responsibilities to free up their IT staff for more business-critical tasks.

Recurring Phone Circuit and Long-Distance Charges

On-Premise phone systems involve connectivity for voice and sometimes data for in and outbound calls. These costs can include setup charges, usage-based charges, and monthly recurring charges. Standard local lines, PRI's, or SIP Trunking with Data Network Access connection would be required, each with its own contract. With a Hosted Phone System, you don't need separate local lines and PRI's at each location. You can make calls by dialing inter-office extensions without incurring long distance charges.

Electricity Cost

Another overlooked expense when it comes to On-Premise systems is the power draw that is required to maintain the computing requirements and cooling demands of the system, this usually adds up to a considerable increase in electricity usage. With Hosted Phone, your power requirements are minimal, only your PoE switches and modems/routers need power. When the power goes out, calls can still reach a hosted system and failovers can be put into place to forward to cell phones, voicemail, or other sites when the phone is recognized as offline.

Recurring Costs	
On-Premise	**Cloud-Hosted**
Maintenance Contracts	No Maintenance Contract – Upgrades are included
Long Distance Charges	No Long-Distance Charges

6. Side-by-Side Comparison

	On-Premise	Cloud-Hosted
Telephone Circuits	The customer is responsible for ensuring that the right types of circuits get installed in the right places to support their connections.	The service provider brings in the necessary circuits and manages the installation and configuration for the customer.
Spare Parts	Maintaining an inventory of spare parts to support ongoing maintenance requirements or having an active agreement in place with a third-party break/fix service to handle necessary parts sparing.	In a hosted scenario, all hardware and software maintenance, including spare parts management, is handled by the hosting provider and requires no customer involvement.
Facilities	A business hosting its own PBX needs to ensure the facility is properly fitted for space, power, HVAC and security. This ensures reliable and secure operation. 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.	With a hosted PBX, equipment is housed in a remote environment, eliminating a business' need to maintain space and accommodations.

Training	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 and training are always handled by the service provider eliminating this cost completely.
Technical Skills	With an on-premise system, IT staff must stay up to date on technology advancements. Keeping informed about announcements of changes needed to reduce security risks, as well as being aware of software releases, upgrades and patches required to stay current and plug functionality, performance and security holes. Some upgrades can also require corresponding hardware upgrades and even reacting to end-of-life announcements by seeking out apt replacement products.	In a hosted scenario, the service provider ensures that infrastructure is upgraded and refreshed to optimize efficiency, performance and reliability.

Flexibility	Changes are often intricate and require project planning for effective implementation and could involve changes and charges by the telephony service provider. Adding locations or integrating a new company that has been purchased is often cost excessive as different phone systems won't integrate and multilocation systems need to be purchased from the start, therefore requiring a completely new phone system.	Changes are completed with a simple call to your service provider or online via access portals (available with most providers today) which helps you respond to customer demands. A call center capability, or a new campaign queue can be added quickly and easily. An optional auto attendant can be updated dynamically to improve customer support and the customer experience
Scalability	On-premise solutions are designed for a fixed number of users typically in 8, 24, or 100 increments. From a capacity perspective, before a system is bought, businesses in growth mode must estimate 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). 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 tens to hundreds of thousands of dollars.	A hosted PBX service can be scaled up or down almost instantly by the customer, 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. Scaling up or down is seamless and the business only pays for the services it uses, so there are no unused lines running up unnecessary expenses.

7. Sample Cost Comparison

The following table highlights the typical charges of a premise-based solution versus a typical cloud-hosted solution with 10 users.

Table: 10 User Cloud-Hosted [1] vs. Premise-Based

		Cloud-Hosted Solution			Premise-Based Solution	
		Upfront	Recurring		Upfront	Recurring
PBX Hardware		-	$350		$10,000[2]	-
Phone Hardware		included[3]	-		included	-
Installation		$800[4]	-		included	-
Maintenance		-	-		-	$1,000 (annual)
Phone Lines (4)		-	included		-	$2,000 (annual)
Long Distance		-	included		-	$200 (annual)
Totals (Annual)		$800	$4,200		$10,000	$3,200
1 Year Total		**$5,000**			**$13,200**	
3 Year Total		**$13,400**			**$19,600**	
5 Year Total		**$21,800**			**$26,000**	
10 Year Total		**$42,800**			**$42,000**	

[1] Cloud-Hosted uses 24-month contract with Install, First Month and Last month due at signing. Volume discount pricing is available. This is a budgetary for comparison purposes only.

[2] Uses industry-average typical $1,000 per user\telephone costs, including phone system, phone and installation for a leading PBX such as Avaya, Mitel, Cisco, etc.

[3] This includes a Htek GB Color Screen UC923 Leading IP Telephone

[4] $300 budget for professional on-site install (cabling extra if required) and $50 per device remote programming

8. Others Hosted Benefits

Other benefits which are less visible when using cost comparison models:

- Better communication and configuration across multiple locations, this includes mobility such as remote workers, and home office employees.

- Increased productivity among employees with desktop and multimedia collaboration tools.

- No location constraints, employees have access to information and company resources anywhere. Send calls to any phone, anywhere in the world.

## Hosted Systems Offer Scalability and Compatibility

Add-Ons

Many premise-based systems come with standard features, however, if you want to add applications such as call center features it's common that most premise-based systems cannot scale to support it. Due to this, a larger and more complex and costly system would be required from the beginning. With cloud-hosted solutions, these applications can be added on as a feature to your existing service without requiring expensive hardware or software licenses.

Disaster Recovery Planning

Another advantage to a hosted solution is the ability to failover when the phones are offline due to any unforeseen circumstances. With on-premise solutions, if a failure occurs- an inbound called will either get a busy signal or a ring with no answer. For a caller this may appear that something is wrong- either the company is not able to answer the telephone, or, they have gone out of business. With a hosted solution this risk is drastically reduced due to the ability to fail-over calls to voicemail, or even a cell phone if the phones at the location are offline. This means that even though the phones are unreachable, the company still appears to be active and the caller can leave a voicemail or reach an external number depending on the configuration.
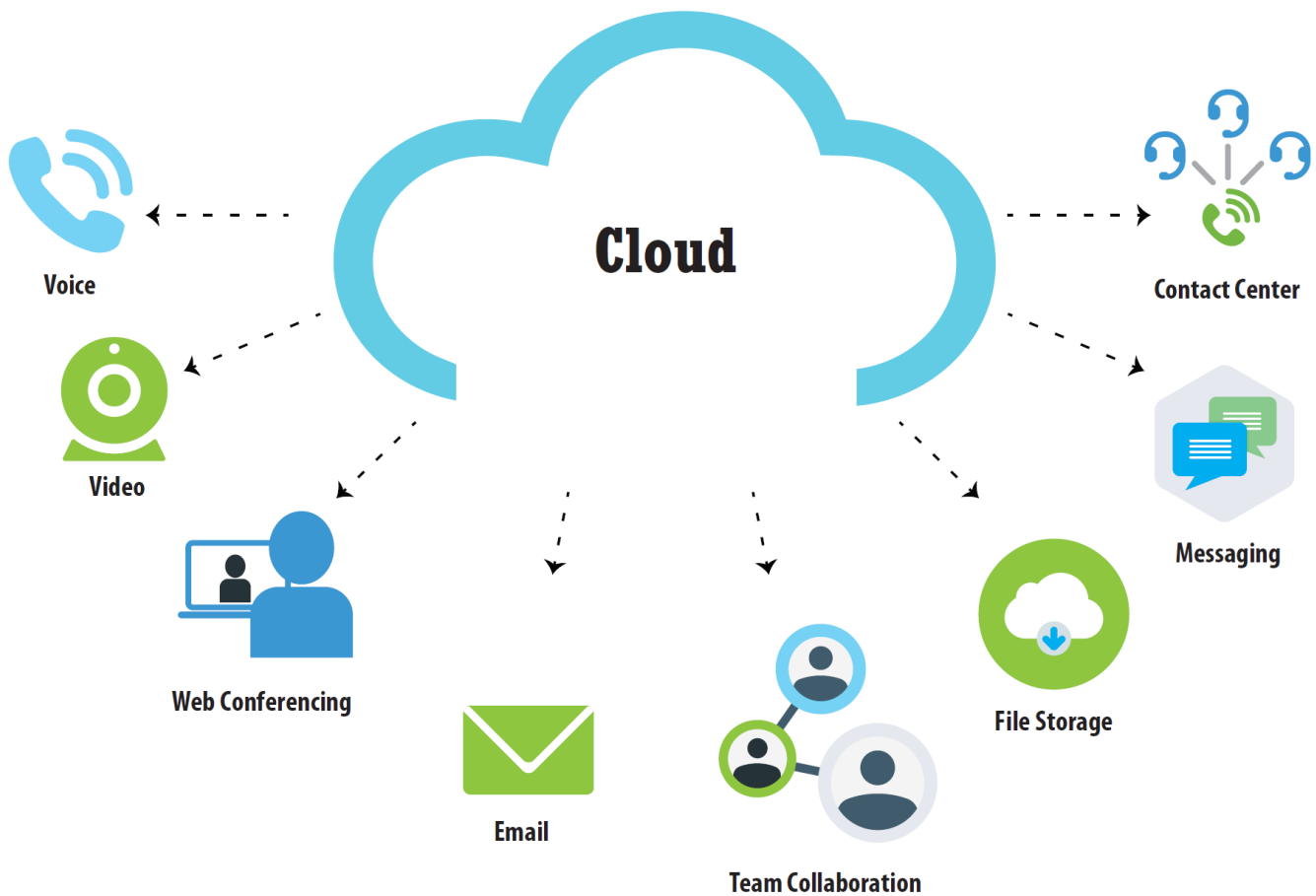
9. Hosted Solutions are a Cost Saving Champion

In a side by side comparison it becomes obvious that a hosted solution provides adaptability, scalability, and better short-term savings for a more cost-effective solution.   To summarize the highlights of a hosted solution that result in lower costs:

- Little to no upfront hardware costs on contracted agreements.
- Minimal internal staff required to support the system during and after implementation
- No expensive and time-consuming certifications.
- Hosted solution providers handle ongoing maintenance and support requirements
- Hosted solution providers handle moves/adds/changes.
- Infrastructure patches, upgrades, and refreshes are all handled by hosted solution providers typically at no additional charge.
- Hosted infrastructure is always kept up to date and phone hardware can be refreshed with contractual agreements.
- Predictable flat rate plans which simplify accounting and budgeting

Cloud-Hosted telephony reduces the complication in delivering new and complex system capabilities which, in some cases, are not possible to achieve in a legacy telephony environment. Most of these newer features are the driver of top-level business benefits like increased revenue, stronger customer satisfaction ratings, and enhanced competitive differentiation.

ZK Research 2019 Global UC Forecast