The advantages of hosted unified communications

How a carrier-hosted approach can bring significant cost savings to mid-sized enterprises
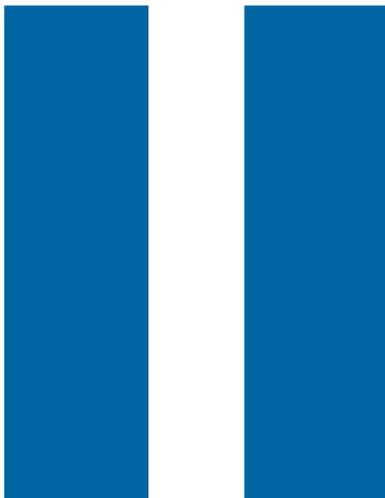
A white paper from Bell

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What's inside

With unified communications, enterprises can bring together their telephony, conferencing and collaboration tools to improve employee productivity and deliver a better customer experience. This white paper explores the defining characteristics of unified communications and its three main operating models: on-premises, managed and hosted. It compares the total cost of ownership of each operating model, drawing on a five-year use case of past Bell deployments to illustrate how the carrier-hosted model offers greater benefits to medium-sized enterprises than the on-premises approach.

Contents

Introduction

A unified communications system can be critical to delivering an exceptional customer experience and driving greater workforce collaboration. Yet while many businesses across Canada recognize the benefits of adopting unified communications, the fact is that some still don't have a clear understanding of what it actually is – or how it can be deployed.

The reality is that unified communications comes in many different flavours, with each option bringing its own pros and cons to the table. But one particular approach has gained considerable momentum recently: carrier-hosted unified communications. It's an operating model that offers compelling benefits to medium-sized enterprises, most notably in the way it alleviates the time-consuming and expensive burden of having to manage and update on-premises hardware.

Before they adopt or migrate to a hosted service, however, enterprises should first take a close look at each of the three main operating models and their potential impact on the total cost of ownership (TCO) of their unified communications solution – and on their organization as a whole.

What is unified communications?

Key components

At its core, 'unified communications' refers to the integration of multiple enterprise communications streams to enrich the user experience and improve business productivity. Practically, this often means using a mix of mobile and desktop applications to allow employees to communicate and collaborate with each other all times. It also gives them the flexibility to manage their business communications from any location or device.

While its exact scope continues to evolve, unified communications is typically made up of the following:

Enterprise telephony

Enterprises rely on rich voice and IP telephony features and capabilities for their daily operations. With unified communications, end users may access these features from their desktop and mobile endpoints anytime, anywhere.

Team collaboration

Traditionally, team collaboration has been achieved through separate, independent communications systems. These could be either asynchronous and non-real-time (e.g., email, voicemail, wikis, social media) or synchronous and real-time/near-real-time (e.g., voice and video calls, two-way radio, instant messaging, presence). But in recent years, asynchronous and synchronous systems have become more natively integrated, letting users seamlessly switch between modes of communication from moment to moment.

This 'always-on' environment is enabled by the latest team collaboration tools, which are sometimes called workstream communications and collaboration (WCC) or workstream communications services (WCS). Originating from persistent group messaging, they have since evolved to add multimedia calling and conferencing capabilities as well as structured and threaded messages, search, tasks, integrated group and individual storage, and other third-party business apps. Examples of team collaboration tools include Slack, Cisco Spark, Broadsoft Team-One and Microsoft Teams.

Conferencing

Conferencing tools have also evolved rapidly over the last few years, going from separate audio, web and video conferencing to all-inclusive multimedia conferencing combining all three capabilities and supporting all endpoints: desktop (e.g., IP phones, PC-based softphones, webcams), legacy (e.g., PSTN phones), mobile (e.g., tablets, smartphones) and room (e.g., video endpoints, smartboards). Going forward, the dividing line between team collaboration and conferencing will become increasingly blurred, with many conferencing functions expected to be absorbed within team collaboration tools.

Communication-enabled enterprise applications

This broad component includes contact centre applications, notification applications, reporting and analytics tools, and workflow and business process applications (e.g., enterprise resource planning, business continuity management, customer relationship management). All of these are integrated with or enabled by the other unified communications components.

How it can be deployed

Unified communications services are typically deployed within three overarching operating models:

On-premises unified communications (customer-owned, customer-managed)

With this approach, the enterprise is in full control. It owns the unified communications application systems, builds and maintains its own supporting infrastructure for those systems, and manages the daily operations of the unified communications services provided to employees.

With that control, however, come many responsibilities:

> The enterprise needs to select and procure the right unified communications technologies for its specific business requirements. This is often a lengthy, resource-intensive process that can involve issuing a request for information (RFI) followed by a request for proposal (RFP) or request for quote (RFQ).

> To deliver the necessary levels of quality of service (QoS), availability and security, the enterprise must ensure it has the appropriate supporting infrastructure for its unified communications applications, including:

> - Data centres to host application systems
>
> - Network operations centres (NOC) for fault, configuration, accounting, performance and security (FCAPS) management of the application systems
>
> - Security operations centres (SOC), which are typically shared by network- and application-layer security functions
>
> - Front- and back-end business support and operating support systems (BSS/OSS) for service fulfillment and service assurance
>
> - IP network connectivity to link enterprise sites to the data centres (to enable user access to the application systems), the data centres to the NOC and SOC, and the enterprise to PSTN (via ISDN PRI trunking) and other enterprise VoIP networks (via SIP trunking)

> With the infrastructure in place, the enterprise is responsible for deploying and implementing the unified communications solution.

> To keep its applications up to date, the enterprise will need to perform periodic hardware and software updates and upgrades. It will also need to handle routine support such as user account modifications and MACD (move, add, change, and delete) requests.

To provide all these functions properly, the enterprise must maintain a sizeable, highly skilled IT team. It will also have to weigh the costs of real estate, operations, maintenance and staffing related to the supporting infrastructure. To alleviate some of these concerns, enterprises may choose to virtualize its on-premises unified communications solutions on a dedicated, single-tenant private cloud.

Managed unified communications (customer-owned, carrier-managed)

Under this operating model, the enterprise owns the unified communications application systems and is still responsible for building the necessary supporting infrastructure. However, management and operation of those systems are outsourced to a service provider (carrier) under a managed service contract.

While the specific arrangements of these contracts will vary from provider to provider, the management and operations of the unified communications application systems are normally handled through the carrier's NOCs.

Hosted unified communications (carrier-owned, carrier-managed)

Under this model, the enterprise outsources its entire unified communications solution. The carrier owns the applications, builds and manages the unified communications services in its data centres, and offers those services to enterprises through a service subscription (with a monthly recurring fee) under a hosted service contract. The carrier also provides QoS-enabled IP connectivity for enterprises to access the unified communications services and to interconnect with PSTN and other peer VoIP networks.

Here, most of responsibilities associated with the on-premises operating model are taken over by the carrier, meaning the enterprise can focus on its core business objectives instead of routine IT tasks. Additional benefits include:

Predictable, pay-as-you-go utility billing: Through a per-seat monthly service subscription fee, the enterprise needs to pay only for what it uses – and can scale up or down its service consumption based on its business needs. By emphasizing operating expenses over capital expenses, the enterprise also benefits from a more predictable cost flow compared to the on-premises operating model.

No technology/operations risk: With the on-premises model, after the vendor sells its technology to the enterprise, the enterprise takes on all the technology and operations risk. With the hosted model, the carrier assumes that risk: as the enterprise no longer owns the application systems, it is the carrier's responsibility to ensure the best technologies are selected, the services operate as they should and everything is kept up to date.

No need for upfront infrastructure investment: With the carrier running all of the applications and services on its own infrastructure, the enterprise avoids having to build and maintain data centres, NOCs, SOCs, OSS/BSS and supporting connectivity.

No need to maintain: a specialized operations team: Enterprises that choose the carrier-hosted approach no longer need to maintain a sizeable team of specialized, high-cost operations and security resources to staff data centres, NOCs and SOCs.

A closer look at the total cost of ownership

By removing the need for massive capital investment in supporting infrastructure and by reducing the operating expenses that come with keeping a larger operations staff, the carrier-hosted model will likely result in a lower TCO for most medium-sized enterprises. But how exactly does it compare to the TCO for the on-premised and managed approaches?

Table 1 below provides a high-level TCO comparison across the three unified communications operating models:

Table 1. Unified communications TCO comparison from an enterprise's perspective
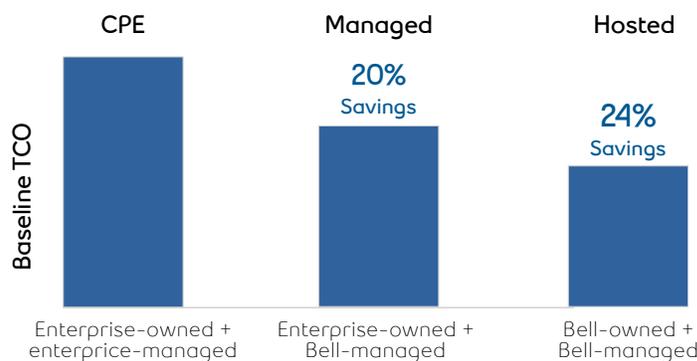
TCO group	TCO component	On-premises	Managed	Hosted
Application systems	Initial capital costs	Yes	Yes	No
	Ongoing maintenance	Yes	Yes	No
	Hardware refresh	Yes	Yes	No
Supporting infrastructure	Data centres: initial CAPEX and ongoing OPEX	Yes	Yes	No
	NOC: initial CAPEX and ongoing OPEX	Yes	Yes	No
	SOC: initial CAPEX and ongoing OPEX	Yes	Yes	No
	Connectivity (e.g., WAN, PRI/SIP trunking)	Yes	Yes	No
Staffing	Data centre, NOC and SOC operations	Yes	No	No
	Routine support (e.g., planning, capacity management, MACD)	Yes	Yes	Yes
Monthly recurring costs		No	Yes (per-system monthly management fee)	Yes (per-seat monthly service subscription fee)
Other costs		Professional services (e.g., vendor engineering, installation)		One-time setup fee, IP phones

How TCO plays out in a real-world setting

Consider a medium-sized enterprise with a total of 1,300 employees across nine different sites. This includes 1,100 employees at its main headquarters as well as eight regional offices each with 25 employees.

Figure 1 highlights the relative differences in five-year TCO between the on-premises, managed and hosted unified communications models, based on Bell's actual experience owning and managing such solutions for organizations across Canada.

Figure 1. TCO comparison for a medium-sized enterprise (per-seat TCO for five years)

CPE — Enterprise-owned + enterprice-managed

Managed — **20%** Savings — Enterprise-owned + Bell-managed

Hosted — **24%** Savings — Bell-owned + Bell-managed

Baseline TCO

Using the on-premises model as the baseline, our medium-sized enterprise would save 20 percent by choosing the managed model and 24 percent with the carrier-hosted approach. The savings resulting from the hosted model stem from the minimal requirements for on-premises equipment, lower professional services and set-up fees, reduced staffing requirements and bundled pricing for connectivity access.

And that's only part of the story: the numbers above do not yet include the substantial costs associated with building and staffing the supporting infrastructure (data centres, NOCs and SOCs).

What's the value of a 24/7 NOC?

One of the major benefits of choosing a carrier-hosted unified communications solution is its service availability and always-available customer support delivered through the carrier's 24/7 NOC.

An enterprise that wants the high level of control that comes with the on-premises model will likely need 10 to 12 skilled operational resources to staff its own 24/7 NOC. But assembling that kind of team is not cheap. As illustrated in Figure 2, using a loaded labour rate of $140,000 per person per year, supporting the NOC alone could add $117 per user per month to the TCO of a business with 1,000 employees.

Figure 2. Impact of NOC staffing on entreprise TCO
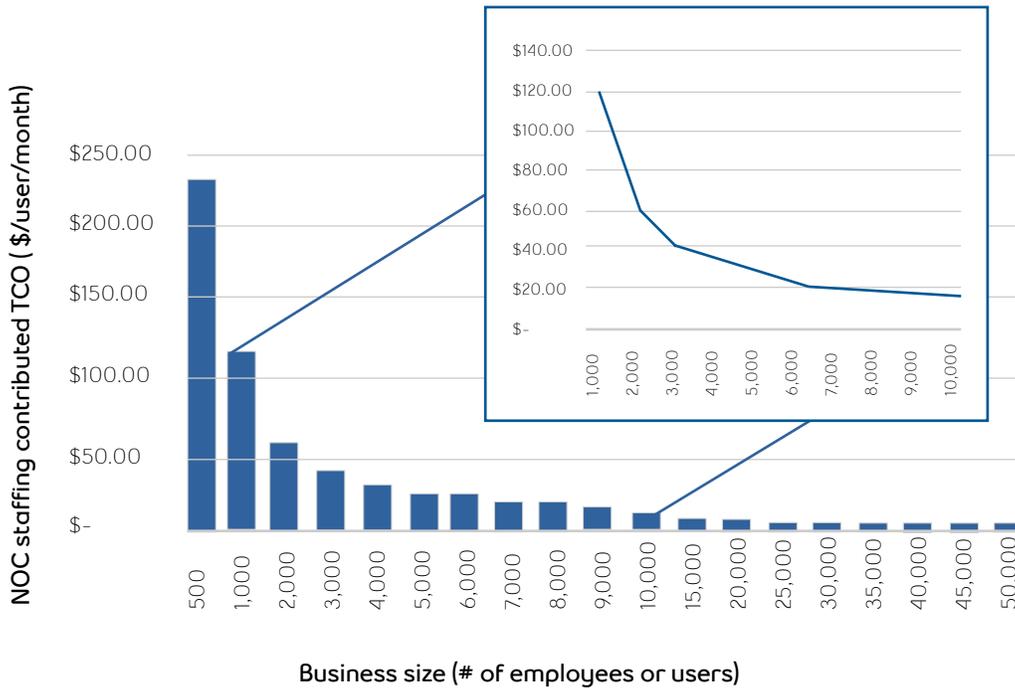
Based on these numbers, it is clearly cost-prohibitive for a small or medium-sized business to consider running its own 24/7 NOC for unified communications. Even for a larger business, the NOC-contributed TCO would be significant. For a business of 10,000 employees, for example, supporting a NOC would add about $12 per user per month to its TCO.

Conclusion

By adopting unified communications, enterprises can deliver an enriched user experience and significantly increase employee productivity. For businesses across Canada, the various unified communications operating models each have their own advantages and disadvantages: while the on-premises approach provides a greater degree of control, carrier-hosted unified communications offers a much lower total cost of ownership by removing the need to invest in on-site infrastructure and specialized operations staff.

Bell has a market-leading hosted unified communications service portfolio and qualified consultants to help Canadian enterprises realize their unified communications goals. With the Bell Total Connect service, the entire unified communications system is hosted and managed in Bell's secure Canadian data centres and connected to the business via Bell's network, delivering crystal-clear voice quality along with a full range of messaging, collaboration and conference tools.

Contact your Bell sales representative to discuss the right unified communications solution for your business, or visit bell.ca/enterprise for more information.