2600Hz

Speaking Clearly

How Cloud is Changing Business Communications

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Intro

Moore's Law continues to hold steady in the world of modern business. As technology development accelerates, it becomes further embedded in everyday processes. Cloud has revolutionized the way companies innovate, grow, collaborate, and communicate with others. Cloud-based VoIP provides business communications with more flexibility and management capabilities than ever before.

In this eBook, we'll review the journey of enterprise voice from hardware and landlines to modern cloud-based VoIP, then explore how pairing cloud voice infrastructure with the right call platform maximized the value for business owners, managers, developers, and employees.

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Voice Before Cloud

Landlines aka PSTN (Public Switch Telephone Systems)

All businesses and homes only had one option for making phone calls prior to the introduction of VoIP technology in 1995. Still in use today, Public Switch Telephone Systems (PSTN), commonly referred to as landlines, transmit electrical signals via copper wire to generate sound signals through the receiver at the other end of the wire. That's right - every PSTN call has one dedicated path to travel. For this reason, operators would perform the switching, or call connection, for every call that was made. Eventually, human operators were phased out and replaced by automated digital switching, which was carried out by dialing phone numbers.

In a business environment, the automated digital switching is performed by a private branch exchange (PBX) system. PBX systems perform the routing required for things like extensions, call flow customization, and internal transfers, and were essential to managing communications ons in large enterprises.

Costs & Benefits of PSTN

Although traditional phone wiring and PBX systems are still in use at some organizations today, largely because of the direct control IT managers have over the system, there are significant drawbacks to relying on this infrastructure model. The hardware requires ongoing maintenance by trained IT personnel, as well as a physical storage location. Traditional voice infrastructure also requires the business to essentially plan around it when scaling; any additional equipment is a capital expenditure, which requires budget allocation and planning. For these reasons, on-premise voice technology is quickly becoming retired at many businesses, who instead are opting for the flexibility and scalability offered by cloud-based voice systems.

The Cloud VoIP Revolution

To understand how cloud VoIP fits into business, let's first clearly outline the term into its two fundamental parts: VoIP and Cloud.

Defining VoIP

Voice over Internet Protocol, or VoIP, is calling that conceptually functions in a similar way to PSTN, but relies on internet data instead of electrical signals. Packets of specialized audio data files are sent through coaxial and fiber internet lines to reach their intended recipient, and thousands of unique data packets can travel on these lines simultaneously. While callers still have phone numbers, their VoIP receivers have unique addresses that allow users to receive calls from anywhere as long as they have an internet connection.

Defining Cloud

Even today, cloud computing has no rigid definition, since many businesses and users can implement a unique cloud infrastructure that hosts some workloads but not others. Generally, however, the cloud is considered to be a remote data center that houses all of the hardware used for computer processing or networking. These data centers can be owned by the organization or by a third-party, which would make the cloud private or public, respectively. A popular use of cloud by both consumers and businesses is for storage purposes, where users upload and download files through a web browser-based interface without using memory from their personal devices.

Merging the Two: Cloud-based VoIP

Considering the separate definition for VoIP and cloud, cloud-based VoIP can therefore be defined as VoIP services that rely on off-site server and switching hardware that is managed by a provider. Provisioning users, changing call flow settings, and porting numbers can be controlled by a system administrator via the internet, and other individual features like voicemail access and call forwarding can be set up by the user of each unique VoIP receiver.

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Costs & Benefits of Cloud-Based VoIP

The benefits and drawbacks are more or less converse to the ones mentioned earlier regarding PSTN. Some IT teams see the lack of direct hardware access as a concern because they have less control over system health and security, but most providers offer support services to counter these concerns. Other than that, the benefits of cloud-based VoIP are readily apparent. Because of third-party management, systems are easily scalable upon request, with minimal IT intervention to onboard a new employee or other user. Cloud-based VoIP typically operates on an OpEx spend, meaning payments are made for ongoing service month-over-month; these lower costs are much easier to budget for and allow for flexibility in business development.

Finally, businesses are often wary of the risk of downtime through their outside provider, but those providers usually offer minimum service level agreements (SLAs) to protect their users.

Conclusion

With the rise of the cloud and VoIP revolutions, businesses have been able to seize the advantages of these new voice methods. They have become mobile, activating remote workers on company devices from anywhere in the world via the internet. They have become scalable, and able to onboard new employees and connect departments more easily than ever. Finally, they have become more profitable by minimizing the costs of managing their voice infrastructure while maximizing their employees' and administrators' self-management. All of this has been made possible - but not all systems are created equal. Not every call platform gives enterprise businesses the flexibility to develop, automate, and tailor their communications to their specific needs. That's why it is so important to find a platform that gives business users core productivity functions and developers a foundation for innovation.

About 2600Hz

2600Hz is a telecom solutions engineering firm building communication systems for businesses of all sizes. A leader in cloud communications design, 2600Hz offers the reliability of the legacy providers as well as the flexibility of cutting-edge features and scalability like never seen before.