Government White Paper

Dialing into Success: Make the Connection with VoIP
Whether running a business or operating departments at the state and local level, such technologies as Voice over IP (VoIP) are rapidly becoming indispensable tools to get work done. With the power to accelerate cost savings and drive new efficiencies, these solutions are critical for building competitive advantage and accelerating market leadership. And the numbers back this up.

It’s estimated a typical business or government agency can save anywhere between 50 and 75 percent by switching to VoIP. This is fueling unprecedented market growth, with analysts predicting the global VoIP market will reach $136 billion by 2020. This same market was estimated to be only $71 billion a little more than two years ago.

But not all VoIP is created equal, and not every solution is right for every company. Organizations have a wide range of options when it comes to integrating VoIP across their infrastructures. From Hosted VoIP and VoIP Network Solutions to On-Premise Managed VoIP, the choice for adoption depends both on organizational goals and current network infrastructure. Even further, this choice also impacts growth and development of the infrastructure as organizations shift towards a full Unified Communications and Collaboration (UC&C) strategy.

This paper is designed to narrow the VoIP and Unified Communications and Collaboration (UC&C) playing field — getting organizations connected with the best solution to accelerate new levels of communication, collaboration and productivity.

VoIP: Behind the Scenes

To understand the most effective implementation strategy, it’s critical to understand the technology working behind the scenes. Traditional voice — also known as POTS (Plain Old Telephone Service) — is led by the Public Switched Telephone Network (PSTN). This technology leverages circuit switching to power landline calls from one point to another. After being routed via multiple switches by a Central Office, voice calls are completed over connected phone lines. Individual subscriber lines are typically connected to a local exchange, which connects to trunk exchanges, main and central exchanges.

On the other end of the spectrum is VoIP technology. Under this approach, standard telephony services are powered by packet-switched protocols over broadband. These individual voice packets not only contain voice signals, but also the caller and receiver network address. These data-rich packets can travel alongside any VoIP-enabled computer network to flexibly carry data and voice traffic. This engineers a fully integrated, advanced telephony system with high quality, lower costs, accessible anywhere services.

VoIP is also the foundation for an enhanced collaboration and unified communications environment — where voice is one of many applications running over the same network. Additional functionality enhancing real-time experience can include e-mail, instant messaging, video and Web conferencing.

For both small businesses and government agencies where lean operations are critical, VoIP is proven to make a difference. In fact, research indicates organizations can save 40 percent on local connections and 90 percent on international calls using VoIP. The flexibility of VoIP means there’s no need for additional hardware investments — as the only required device is the VoIP phone system.
The technology also allows for multi-functionality — including call forwarding, call waiting, group calls and speed dialing — creating more enhanced call processing opportunities for advanced productivity. With additional portability, VoIP users can make or receive calls from any location using the same phone number. Scalability is key, with the power to involve multiple users into a VoIP package — making seamless, integrated communications possible. These solutions are also proven to advance voice reliability, continuing service even if traditional land lines are down or cell service interrupted.

But not all VoIP implementation types are created equal. Technology adoption depends on specific business needs and IT infrastructure currently in place. Once the choice to adopt VoIP is made, the next step is determining which implementation is suitable for the organization.

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**Not All VoIP is Created Equal**

There are a range of VoIP “flavors” from which customers can choose. Determining the best fit is almost as important as the choice to migrate away from POTS. For businesses and government agencies, the most reliable approaches to implementation typically fall into three categories: Hosted VoIP, Network VoIP, and On-Premise Manage VoIP.

**Hosted VoIP**

Hosted VoIP is an alternative for new, single-to-multi-site businesses. It’s also effective for large businesses seeking a fully-managed voice solution with little or no IT support. Hosted VoIP is led by a cloud-based offering, enabling internal IT departments to maintain administrative control without the burden of managing two separate networks.

Hosted services leverage packet-switched telephony to transmit calls over the Internet, but all VoIP equipment is hosted by the provider. This provider manages calls and routes them to and from the subscriber’s existing telephony system and equipment.

One of the major benefits of hosted systems is cost. Cloud-based VoIP enables businesses of any size and with any budget to capitalize on the power of VoIP. There’s no additional hardware and maintenance, and services can be budgeted with a predictable fixed monthly cost. The model also allows for easy maintenance and upgrades with scalability to grow along with the business. Users can connect from virtually anywhere on almost any device. As capital investments are low, these systems are deployed more quickly with the power to scale.

Hosted VoIP is often the best fit for organizations with aging phone systems that desire an upgrade without the cost of new capital equipment.

**Network VoIP**

Network VoIP is a good fit for businesses seeking lower network costs and more efficient use of valuable bandwidth. The solution provides all the features of VoIP, but allows customers to leverage existing equipment. VoIP Network Solutions with SIP (Session Initiation Protocol) Trunk consolidates dedicated voice and data networks into a single solution — enabling companies to more efficiently and cost-effectively tap into current bandwidth and equipment. Costs are reasonable, as organizations only pay for time spent on the network.

Here’s how it works: Internet Service Providers (ITSPs) provide voice and unified communications to customers equipped with SIP-based private branch exchange (IP-PBX). Basically, a SIP trunk is a virtual version of an analog phone line. SIP trunks allow providers to connect one or multiple channels to the PBX — powering local, long-distance, and international calls over the internet. This flexibility also makes it easy to drive advanced services such as video conferencing, instant messaging, real-time collaboration and media sharing.

Network VoIP is an ideal solution for businesses or government departments seeking to capitalize on existing investments, while lowering costs and making more effective use of current bandwidth.
On-Premise Managed VoIP
On-Premise VoIP is a phone system with equipment installed and maintained by the organization. This infrastructure includes everything from servers to cable and routers. Each piece of hardware with a traditional on-premise PBX system is both deployed and maintained by internal IT staff.

This approach is ideal for those seeking a favorable long-term cost of ownership. Because the system is on-site, any changes or upgrades — such as adding a new line or extension — can be made quickly. These systems empower customers to make all determinations regarding system specifications, ensuring the configuration exactly matches an organization’s unique requirements. A word of caution: These systems are associated with large up-front capital investments and heavy operational and maintenance costs.

Typically, this solution is best for large enterprises hoping to maintain control of systems, with the power to modify and configure solutions for specific needs.

A Word about UCaaS
No conversation on enhanced VoIP would be complete without a brief look into expansion into hybrid models. One of the most popular approaches to adopting UC is Unified Communications as a Service (UCaaS). The solution is a cloud delivery model providing a range of communications applications and services, including enterprise messaging, video conferencing, and online meetings. UCaaS solutions are highly scalable — allowing companies to add or remove services as needs change. Eliminating the need for acquiring and managing new equipment, UCaaS is key to streamlining complexity and costs.

A UCaaS solution is often an ideal fit for those organizations seeking to lay the groundwork for true multi-site collaboration and employee mobility — in an infrastructure that is flexible and able to adapt to the pace of business and technological change.

Making the Connection
VoIP is a necessity for government agencies seeking to keep pace with the high speed and collaborative nature of today’s world. In this competitive marketplace, organizations cannot wait to update their communications infrastructure. And while implementation options are vast, the right partner can make the transition a bit easier.

Backed by a proven track-record of successful implementations, partners like CenturyLink can identify the right strategy and get you started with a strategic roadmap for implementation and growth. Contact CenturyLink now — the success of your organization just might depend on it.

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