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(Exploring the Business Benefits of a SIP Solution)
ike many businesses, scarce capital and limited employee resources have challenged your organization in its efforts to upgrade parts of its IT and telecommunications infrastructure over the past several years. The common perception is that upgrades are costly, consume a lot of resources, and carry a certain amount of risk. But delaying upgrades carries risks of its own.

Think about all that’s changed in the past five or six years. Society in general — and business in particular — is more mobile and more geographically dispersed. The traditional nine-to-five workday is disappearing. Every day people collaborate with co-workers and partners located around the world. Customers are empowered by the Internet and social media, and they can broadcast praise or criticism in a split second.

Can your business survive in this world using the same telecom functionality it was using five or six years ago?

Session Initiation Protocol (SIP) is the primary mechanism used for communication between Voice-over-IP (VoIP) devices and networks. As you read this eBook you’ll also learn about “SIP trunking,” which is the term used by carriers that offer a direct connection between a customer’s VoIP devices and the carrier’s network. SIP trunking opens up the native SIP protocol and all of its possibilities to customers of the carriers that offer it.

SIP allows businesses to create a whole new level of functionality by taking advantage of the convergence of voice and data networks, including call center applications, unified communications, a better mobile experience, and more.
be able to recover quickly from a natural or man-made disaster, are also ideal candidates for SIP.

Building the Business Case

As with any other technology deployment, businesses need to weigh the costs and the benefits of upgrading to SIP. New equipment and new functionality is nice, but executives and business leaders that control budgets need to see clear business benefits and understand the timeframe of return on the investment before approving such a project. The desire for a pathway to SIP voice that limits risk and the need to invest in new technology is understandably desirable.

This eBook explores the business benefits of adopting a SIP solution by focusing on three specific areas: unified communications and collaboration (UCC), business continuity and disaster recovery (BCDR), and cost savings.

If more efficient operations, increased collaboration, improved uptime, and controlling costs are of interest to your business, keep reading and learn how SIP can help you begin creating the business case to upgrade today.

“As with any other technology deployment, businesses need to weigh the costs and the benefits of upgrading to SIP.”
There’s been a major paradigm shift in the way businesses communicate over the last 15 years, and it’s not over yet. Fifteen years ago most business communication, whether internal or external with customers and partners, was centered on the telephone. Then business communication shifted to email, which was convenient and easy to use and access, but wasn’t really a vehicle for instant communication. Email is now giving way to real-time communications that are centered around the variety of devices people use on a daily basis, including PCs, tablets, and smartphones.

Unified communications and collaboration (UCC) creates an environment where real-time messaging technologies like voice, video, email, text, and more are applications that can be combined, delivering greater flexibility for their users and enabling new ways to transfer information and manage connectivity.

UCC applications built on a SIP platform hold a number of benefits for businesses. It’s easier to access integrated services, and faster to collaborate with co-workers, partners, and customers regardless of their location. Real-time presence information cuts down on “phone tag” and the delays inherent in email. Business decisions are made more quickly when it’s easier to share information. But the easiest way to summarize the business benefits of UCC is that it enables business growth.

In an age where information is constantly available to customers and partners, an increasingly important part of business is simply being available. It’s never been easier for customers to find another vendor, and having the ability to communicate in real time and share information in ways that simply weren’t available over the telephone or email cannot be overstated. Regardless of the location of either party — or their device of choice — presentations can be shared, questions can be answered, and deals can be closed.

UCC is not only the future of real-time communication; it’s the future of business communication.

The Challenges of UCC

Many organizations already have some of the pieces of a UCC solution in place, but lack a holistic offering that is designed to work together. By adopting UCC powered by SIP trunking, these organizations can introduce a number of high-value services to their end users while shifting budget away from their traditional islands of siloed UCC offerings. There’s no need to pay different
vendors for audio conferencing, video conferencing, and instant messaging solutions that weren’t designed to seamlessly work together. Simpler to access and use, these integrated applications reduce the corrupted time and wasted resource that frustrate many large, global enterprises.

Consolidating communications applications into a truly unified system makes a lot of business sense, but at the same time UCC offers challenges of its own for IT organizations. The wealth of features created by UCC creates inherent complexity.

Businesses that adopt a UCC offering need to discover the best way to scale and support mobility in an organization that’s now equipped for anywhere, anytime communications. For an increasing number of organizations, this is being done with a Bring Your Own Device (BYOD) policy. Controlling costs is another formidable challenge for organizations worried about capital expenditures (CapEx) and that might experience an increase in costs based on their headcount.

On the technical side, some IT organizations struggle to deliver a consistent quality of experience with the UCC tools. They need to understand how to integrate different components together, and how they’re going to develop their own in-house expertise with new UCC applications and platforms.

Understandably, these challenges are causing many businesses and IT organizations to consider turning to UCC experts to partially or completely outsource their communications services.

What to Look for in a UCC Provider

UCC delivers the most business benefit when it simplifies operations, so finding a single vendor that can deliver holistic UCC solutions, from software to network, including voice and data, will deliver the best return on investment (ROI).

The four main characteristics to look for in a network for UCC applications are: high performance, resiliency, security, and scalability. The network needs to scale in order to deliver high-bandwidth applications like video conferencing. Performance is also aided by networks that offer some type of intelligent routing capability that optimizes service level agreements (SLAs) and aids audio and video conferencing and content sharing.

Focusing on UCC shouldn’t detract from some of the more traditional services organizations need from network and telecom partners. Look for vendors that provide real-time troubleshooting and problem solving to minimize downtime. Don’t forget about direct inward dialing (DID) capability and 911 service. And remember that SIP trunking allows the devices to access all of the benefits the SIP protocol has to offer.

With all of the vendors and products in the UCC space, it’s important to avoid a situation that leads to silos and makes it harder for users to share and collaborate. Ubiquity is key. UCC solutions need to work for everyone, anywhere, whether the users are on the same network or not. They need to work with any client or whatever application the organization is most comfortable using. Businesses that take advantage of video conferencing or other visual content will want to explore vendors that include transcoding services that ensure their content can be seen across browsers and devices.

Since a ubiquitous UCC experience is the goal, it’s important to find a vendor that relies on standards, which will help businesses connect, federate, and interoperate with their strategic partners. The network needs to be both open and secure at the same time.

How Level 3 Can Help

Level 3 Communications has an advanced SIP network, thought leadership derived from large-scale deployments, and tools that accompany customers from their current state to their target UCC state with the least amount of cost and risk of disruption. There are few organizations that have all the resources necessary to prepare a holistic plan to lay the foundation for a smooth
transition to UCC, but Level 3 delivers voice, network, collaboration, data center hosting, and service delivery.

Level 3 can work with customers to support various transition scenarios and offer a significant value proposition during the migration and once migration is complete. In doing this in part by offering a unified customer experience across heterogeneous environments.

Level 3® Voice Complete is a complete solution for enterprises that want to create a foundation for a UCC deployment. It incorporates a flexible, agnostic SIP trunking service and delivers an entire portfolio of enterprise voice services and supports local and long-distance calling with local telephone numbers, toll free, and simplified pricing options.

Level 3’s fiber networks reach North America, Latin America, Europe, the Middle East, Asia and Asia-Pacific regions. All told, Level 3 reaches more than 45 countries and offers 500 on-network markets, including approximately 170 metro markets and 15,000 on-network buildings. Its voice network is built from the ground up using SIP, and benefits from not operating as a legacy time-division multiplexing (TDM) carrier architecture with “bolted-on” IP. In fact, Level 3 can provide local number and VoIP service coverage to 87 percent of the U.S. population.

As an experienced private cloud vendor, Level 3 has approximately 350 multi-tenant data center and co-location facilities worldwide. It is one of the first carriers to deploy a global multi-protocol label switching (MPLS) network, and it currently holds approximately 1000 patents and patent applications for data, voice, and networking.

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Business Benefit No. 2: 
Business Continuity and Disaster Recovery

There’s nothing like a catastrophe to remind a business that its reliance on technology is precarious at best. Voice, data, and of course electricity service, can all fall victim to man-made or natural disasters, paralyzing businesses that failed to prepare.

Despite some high-profile disasters in recent years, including hurricanes targeting major metropolitan areas or relentless snowstorms, many business remain unprepared to maintain their business operations when a problem occurs. eWeek reports that 81 percent of businesses reported problems the last time they tested their disaster recovery plan. Another 17 percent don’t test their plan at all.¹

Some natural disasters, like storms, provide warning to businesses in their path; others, like earthquakes, can strike suddenly. But it doesn’t always take a major national or regional disaster to take down a business. Careless construction crews can sever cables. Malicious attacks can take down a data center. Hardware and software are prone to failure.

Whenever a business is unable to make the connections between itself and its customers, suppliers, or partners, it’s a disaster. Whether it’s a natural disaster or a local problem, today’s businesses simply cannot afford to lose touch. When a disaster is big news, everyone knows what’s going on; when a cable is cut or hardware fails and your business goes offline, all customers know is they can’t get in touch.

One of the business benefits of a SIP solution is the potential for business continuity and disaster recovery (BCDR) capabilities built into the system. Be forewarned, however, that such offerings vary among vendors. Some vendors will charge customers an additional fee for BCDR services.

Increasing Uptime with SIP

SIP enables better business continuity by providing greater end-to-end visibility into the network and faster issue resolution for better service uptime. Many businesses deploy multiple primary rate interfaces (PRIs) from multiple vendors to connect various office locations. This requires businesses to find the right vendor when there’s an issue that’s making their business unavailable. One of the benefits of adopting a SIP solution is a reduction in the number of network vendors.

Disaster recovery plans aren’t easy to put together, which is one of the reasons so many of them fail when they’re tested or aren’t tested on a regular basis. Businesses need to develop an end-to-end plan, selecting multiple paths for network traffic and deploying additional,
redundant equipment when necessary, to say nothing of the processes and people that need to be put in place. SIP vendors that include BCDR elements take on much of these responsibilities.

It’s easier to identify and avoid network problems with a SIP solution, re-routing network traffic to keep the business running, and ensuring any disasters go unnoticed by customers.

How Level 3 Can Help

When disaster strikes, simplicity can be one of a business’s biggest allies. SIP solutions allow businesses to consolidate networks and facilities and reduce the number of vendors involved. Level 3 Communications operates a secure end-to-end SIP network. The built-in resiliency of the Level 3 network helps offload the costs and resources associated with ensuring high availability from Level 3 customers.

Unlike some SIP offerings, Level 3® Voice Complete service builds in enterprise-class BCDR at no additional cost. Level 3 has network diversity and routing fail-over to help network traffic avoid problems and keep businesses communicating. Level 3 also offers customers self-service network management with real-time access through a Web-based portal.

With many carriers, companies are required to install and maintain their own gateways to connect legacy time-division multiplexing (TDM) PBXs to the SIP service. This often requires businesses thinking about BCDR to deploy redundant gateways at each site to ensure continuous service in the event a site’s gateway fails. Level 3 offers its customers native PRI handoff, which takes place in Level 3’s cloud, allowing businesses to take advantage of SIP features without buying and configuring additional on-premise equipment.

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or the better part of a decade, and probably even longer, it’s been nearly impossible to get an IT or telecommunications project approved without the ability to show immediate cost savings or a very rapid return on investment (ROI).

Adopting a SIP solution helps businesses cut costs in a number of ways, including a reduction in telecommunications network charges and the benefits of more streamlined operations. SIP trunking solutions not only generate operational savings by centralizing voice traffic, but they lay the foundation for services like unified communications and collaboration (UCC), which in turn carry their own potential savings.

The cost-saving potential of a SIP solution is literally everywhere.

Facilities

The first — and perhaps most obvious — area for cost savings in a SIP solution comes from the convergence of voice and data facilities. Every multi-location enterprise has a WAN already in place, and SIP allows that same network that transports corporate data to carry voice.

Most corporate WANs can tolerate the addition of voice traffic without much in the way of additional bandwidth because voice and data traffic can peacefully co-exist with the help of prioritization and Quality of Service (QoS) controls. Voice traffic is more active during the day when business phone calls are made. Data traffic intensifies at night when backups are done. Data can also better tolerate latency in most cases.

When there’s no need for a second network dedicated to voice traffic, eliminating that network eliminates the costs, which include carrier fees and the resources to monitor and maintain the voice network.

The other major area of savings is achieved by replacing TDM (ISDN-PRI) connections at each site to the PSTN to carry voice calls. Voice traffic can be centralized using the MPLS network, and often underutilized PRI capacity is replaced with concurrent calls paths (CCPs) that can be dynamically shared among all sites.

Free Intra-Enterprise Calls

Enterprises that use SIP over a WAN can cut costs by cutting the carrier trunk connections at remote offices, which should substantially cut their monthly telecommunications costs. It’s so easy to pick up a phone in an office and make a call that many people outside of the telecom industry don’t realize the costs that are incurred. A simple call to a colleague in another location costs money at the carrier trunk interface at the source, any usage fees for carrying the call, and at the carrier trunk interface at the destination of the call. SIP networks can eliminate those
intra-enterprise call costs between sites.

**Network Management**

It was mentioned earlier that eliminating a network used exclusively for voice traffic eliminates the resources (whether internal or contracted) to manage that network. But those resources can also be re-deployed within the organization, creating additional operational efficiencies and allowing other projects to take life and generate revenue.

Enterprises that deploy SIP trunking can get access to advanced network management capabilities that provide a great deal of visibility into the network and its operations. They also get a level of flexibility that only SIP can offer, such as the ability to share bandwidth across locations, which works well for locations in different time zones.

SIP trunking also means enterprises have one less vendor relationship to manage, which means fewer contracts and service level agreements (SLAs) to review and fewer invoices to process and pay.

**Cost-Saving Features**

The ability to deploy UCC isn’t the only opportunity for enterprises to adopt cost-saving features with a SIP solution. SIP trunking can open up a world of network-based applications that can help businesses cut costs and save resources. These applications can include auto-attendants, Web hosting, managed security services, and more. A SIP solution that includes emergency 911 management for all employee numbers saves the cost of purchasing and managing via a separate provider. Built-in voice continuity and disaster recovery options also save additional costs. Geographically independent telephone numbers provide the ability to reduce traditional feature costs for mobility and remote office support.

**How Level 3 Can Help**

The Level 3® Voice Complete solution offering allows businesses to take full advantage of the cost savings and operational efficiencies offered by SIP trunking.

Many businesses today rely on multiple primary rate interfaces (PRIs) purchased from multiple vendors to cobble together nationwide or international voice coverage. They suffer from scattered and inefficient network management and they’re often under-utilizing their capacity. They’re likely paying extra for services like business continuity and disaster recovery, access to a 911 network and service, and remote office and mobility features, all of which are included in Level 3 Voice Complete.

Telecom and network expenses for Level 3 Voice Complete customers have been known to come in 30 to 50 percent lower when compared to legacy time division multiplexing (TDM)/PRI infrastructures.

Level 3 Voice Complete customers can buy CCPs in units as needed, as opposed to channelized PRIs that are so often underutilized. Level 3 Voice Complete offers simplified CCP billing options, including CCP and bundled long distance calling; pools of voice minutes; and a single usage rate plan where users pay the same price for long-distance calls regardless of interstate or intrastate jurisdictions. Level 3 Voice Complete customers can also leverage existing telco equipment without taking on additional capital expenditures (CapEx) and administrative burden.

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