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The Essentials Series

The Business Value of SIP VoIP and Trunking

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The Convergence of Trunking with the Platform

As voice traffic moves to Voice over IP (VoIP) and legacy time division multiplexed (TDM) trunking technologies shift more to Session Initiation Protocol (SIP), the two come together to deliver an environment for enterprise business that approaches nirvana. SIP connections, or *trunks*, were originally used internally by VoIP providers, then quickly matured into a service offered by Internet Telephony Service Providers (ITSPs) that enabled enterprise connections from a corporate PBX system to the Public Switched Telephone Network (PSTN). These SIP connections simplify administration because the SIP trunk integrates voice and data onto a single circuit connection, eliminating legacy TDM T-1 circuits. With the integration of SIP, features such as Caller ID and other call-related information is easy to transmit.

Growth of VoIP in the consumer market space continues to fuel broad industry growth that feeds enterprise adoption as well. According to an In-Stat report, the consumer VoIP market will reach 38 percent of broadband households worldwide by 2011. That means the consumer VoIP revenue stream will grow from $15 billion to nearly $44 billion. The enterprise adoption rate parallels consumer numbers today but has recently begun to rise more sharply.

Putting Together the Convergence Pieces

For enterprise business, convergence has been a process that has unfolded slowly. What began as a move to consolidate circuit and administrative costs has become an integration tool that delivers increased productivity, improved business process workflows, and opportunities to deliver services in new and profitable ways.

VoIP as a Building Block in the Foundation

As organizations have deployed VoIP services, one common thread has been noted consistently: VoIP is a building block element. VoIP provides the foundation for other emerging and next generation services such as unified communications (UC). For many enterprises, SIP trunking wasn't a consideration when the VoIP strategy was devised. Like the Information Technology Information Library (ITIL) framework that many businesses have adopted, there is a maturity model mentality that takes hold. As enterprises adopt VoIP, they realize the benefits of integration and convergence. New technologies lead to new thinking. This new thinking is driven by the new foundation of voice services technologies that support the core business derivers.

For enterprises still behind the adoption curve, there is a compelling impetus to change in order to survive in the intensely competitive market. In a recent interview, Charles Larmond, a leading telecommunications industry consultant, was asked why sales of VoIP and SIP solutions are increasing so rapidly. His response raises a number of facets identifying the importance of aggressive adoption.

> *What many businesses have right now is a clogged financial drain with pressure building up behind it. Companies are getting backed up with bills and are just starting to look for new ways to free up the cash flow to keep their operations going. At some point, they have to take action. A lot of companies are cutting back on inventory and salaries, which can hurt their ability to bring in new revenues. But many haven't looked at their phone bills for years and years. And a lot has changed since then. It is possible for a company to save 40 or even 60% on their phone bills by switching from traditional telephone service to VoIP. While that may not be enough to unclog the drain, it can be enough to keep a business alive long enough to survive the current economic conditions. Smart Telecom agents are starting to go out and offer to overhaul the telephone systems and contracts for these companies. I haven't been this busy in years.*

Inventories of manufactured goods, cash flow, salaries, and the like are vital business expenses. Larmond addresses the problem from a business climate perspective, but he really seems to take a survivalist view. Although a relatively sour economy encourages many companies to take a look at cheaper telecom solutions, forward-looking companies are highly motivated to find new business workflow efficiencies that can be delivered only through Communications Enhanced Business Processes (CEBP), part of Unified Communications.

Business and Competitive Differentiators

In today's environment, businesses are aggressively pursuing measurable results from their investments. CEBP holds the promise of measurable business value by connecting the people, information, and workflow processes that support business objectives. This integration can be achieved only by organizations that adopt and leverage the benefits of VoIP services coupled with SIP trunking technologies.

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The following points from the iLocus Global VoIP Market 2008 Report highlight key indicators of the shift in momentum as business enterprises focus on change:

- *SIP trunking has gained significant traction over the last 18 months. As of April 2008, there were over 5 million end users connected to SIP trunks. SIP trunking service revenues are forecast to touch $180 million during 2008 worldwide. By 2012, it is expected to be a $5 billion / year market.*

- *Most telcos and switch vendors are working to get their Voice 2.0 (Communications Aware Mashups) developer programs in place. On one hand, the availability of high-level APIs such as the Web Services APIs opens application development to hundreds of thousands of Web developers. On the other, those developers who invest substantial amounts of money into their applications prefer to go direct to the end user, utilizing Open Source telephony platforms.*

- *Estimated 1.18 trillion minutes of VoIP traffic was carried by service providers worldwide in 2007. That represents a 35% increase over 2006 VoIP traffic. Of these minutes, 286.3 billion was local call volume, 815.2 billion was national long distance (NLD) call volume, and 81.4 billion was the international long distance (ILD) call volume.*

The aforementioned iLocus report coupled with another industry report from the combination of Wainhouse Research and In-Stat in late 2007 provides additional measurable data that points directly to enterprise adoption:

- *In the enterprise segment, an estimated 11.4 million desktop IP phones were shipped in 2007, thereby generating revenues of about $1.13 billion worldwide (iLocus)*

- *Fifty-three percent of IT executives who participated in the Nemertes benchmark entitled Advanced Communications Services 2008, reported their organization was already using, or planed to use SIP trunking services in the next 1-3 years, 26% noting that they were planning for deployment in the 2008-2009 timeframe.*

- *A recent study by In-Stat and Wainhouse Research suggests the entire unified communications products and services market will be $22.6 billion in 2007, growing to $48.7 billion in 2012.*

When we take these numbers from the industry overall, there is a clear and compelling message for every business enterprise—VoIP and SIP are not speculative technologies of the future. They are the foundation of the business network of the present. They're the critical enablers for the next generation of communications and the current generation of successful business processes. They are the tools that empower business process redesign.

The coming widespread adoption of CEBP as part of UC will couple communications technologies with business processes and applications for improved communications channels between customers, suppliers, and employees. The advantages of this combination may include business techniques, best practices, administrative and management tools, and increased productivity. Convergence of services through VoIP and SIP is an invaluable tool in the competitive enterprise environment. It highlights focal areas in redesigning business processes to make the enterprise more effective and competitive.

IP-Based SIP Trunking as a Business Enabler

Many companies have already discovered the cost and productivity benefits of adopting advanced communication services ranging from MPLS and Ethernet to VoIP and SIP trunking. These tools enable organizations to integrate voice, data, video, imaging, and enterprise applications on a single enterprise network. Implementing these advanced services, IT teams do far more than enable effective business communications. They also deliver the tools to better serve customers, generate increased sales, and improve productivity.

The Geographically-Dispersed Enterprise

These capabilities are also reaching out across wireless networks to both remote and truly mobile workers. Unified communications environments are reaching across other communications modalities, requiring IT decision makers to fully understand the implications of IT planning and investment on supporting core business drivers and initiatives.

The rapid expansion of WiFi, existing carrier broadband solutions, and the services ahead such as 3G voice/data and WiMax set the stage for a business environment that is free from the constrains of a single location. Unified communications technologies built on VoIP and SIP enable the always-on, always-connected, transparent enterprise. This new enterprise raises the bar on cost efficiency, competitiveness, and profitability.

Extranet Partners

In the same way IP-based networking has become the standard for business interconnectivity, SIP trunking has become the *de facto* standard for voice communications. Person-to-person communications will always be a cornerstone of business. Whether the enterprise is oriented towards manufacturing of products or delivers services, the old adage that "people buy from people" remains true. Customer service and support relies on person-to person communications, but so do many aspects of supply chain management and partner relationships.

For the enterprise that has moved upward in the unified communications maturity model, SIP trunking as a partnering tool is commonly expected and required of trusted and valued business partners. Just as IP enabled the extranets, SIP enhances the extranet and provides a tool to strengthen the business work processes.

Service Providers and the Evolution

For service providers that deliver enterprise application software solutions, there are new expectations coming from enterprise businesses as a result of unified communications advances. Although an off-the-shelf business application may work for some businesses, most require tighter integration between network voice or data services and their workflows.

Strategic value as part of the value proposition a service provider brings is a competitive differentiator. Service providers that understand and appreciate the value of unified communications and their impact on business workflows and processes is demonstrated by how tightly integrated SIP solutions are packaged.

Why VoIP/SIP Matter

It can't be reiterated enough that VoIP and SIP are the foundation of unified communications. Just as IP routing protocols bind the Internet and make it work, VoIP and SIP are the glue that binds business communications. The value of legacy PBXs and TDM trunking is past. Today, those technologies are a business liability rather than an asset. Today, businesses require a solid unified communications framework to survive and compete. That framework is built on VoIP and SIP for call processing, trunking, and all communications services.

Position for the Future

The move to the IP-based enterprise has been underway for several years. Unified communications are gaining momentum as businesses recognize the inherent value of integration, or convergence. The fully converged network enables immediate cost reductions in both staffing and maintenance of hardware and software. Implementing new services today requires measurably reduced capital investments than traditional systems, which simply no longer meet business needs.

IP's virtualization capability has resulted in significant cost savings. It has also eliminated geographic limitations. Workers can easily sit at a computer anywhere on the planet. Unified communications technologies virtually connect them to all enterprise voice and data services seamlessly and transparently.

Beyond that, the fully converged enterprise is positioned to implement new cutting-edge applications and services that offer significant improvement in business productivity, efficiency, and customer satisfaction.

Maximizing Value

It's widely acknowledged that leveraging existing technologies remains one of the greatest challenges any organization faces in the evolution to unified communications. Businesses must understand and embrace new features and functionality. At the same time, most enterprise cannot abandon old applications upon which the company was built. These tools have driven success and aren't easily replaced.

For many organizations, the change is a migration process, integrating VoIP, SIP, and unified communications strategies site-by-site, group-by-group, or application-by-application. The fully converged IP network runs on a standards-based SIP infrastructure, so this migration can take places in a seamless, phased manner. This approach brings new value each step of the way.

The good news is that even with a small deployment, the benefits of SIP can be leveraged quickly. The evolution to a fully converged, unified communications solution is not an all-or-nothing proposition. There is no requirement to migrate the entire enterprise at one time. It's important to design a strategy around business requirements. As an open standards protocol, SIP promotes interaction and involvement between individuals and companies in shaping how IP communications can grow and evolve.

Competitive Edge Today = Competitive Differentiation Tomorrow

The future of CEBP on the horizon is a powerful and formidable competitive tool. It's the next evolutionary step of unified communications. Enterprises that embrace the fully converged network methods of unified communications will be the ones that are quicker to streamline business processes, adopt new workflows, and adapt to a changing landscape. Unified communications, encompassing CEBP, gives us a glimpse into an era of competition wherein the quick will get quicker. The nimble will become more nimble. The gap between market leaders and losers will quickly widen in the next few years. We can see a window in the time ahead when there will be spectacular leaps forward as innovative companies seize leadership positions in their respective markets. These will be the companies that built a solid unified communications framework and are prepared.

Summary: Don't Fail to Plan. Set the Stage.

An explosion of unified communications solutions is underway. Smart business enterprises are moving quickly in an effort to stay competitive and win in their respective market segments. Voice services have been too oriented toward VoIP alone in the past few years. Now is the time to recognize that voice is one of many communications services of the network. Conferencing and collaboration tools are rapidly becoming crucial factors in unified communications.

The unified communications landscape is filled with opportunity across the spectrum of enterprise business applications. VoIP provided an entry point but not the end objective. SIP delivers a fundamental cornerstone that must be deployed to achieve a fully converged network. This fully converged network provides the first layer. Unified communications is the foundation for the future of CEBP and delivers the promise of the always-on, always-connected, always-growing, successful enterprise.