Beyond trunking: The next wave of SIP transformation

The cost benefits of replacing legacy time division multiplex (TDM) trunk circuits with Session Initiation Protocol (SIP) trunking are substantial and well documented. By connecting all enterprise voice, video and data traffic to a service provider’s Internet Protocol (IP) connection, SIP trunking can save businesses between 20 to 50 percent over the more expensive dedicated TDM trunks.¹

The savings provided by SIP trunking are just the beginning of the story, however. The benefits of SIP can be extended and amplified by using it to integrate facilities, consolidate hardware, and ultimately turn disparate communications endpoints into collaborative SIP sessions. In fact, SIP trunking is much more than a low-cost alternative to TDM trunks; it helps increase business agility and significantly improve employee productivity. As such, it can help organizations ride the next wave of SIP transformation: improving collaboration and enhancing customer experience through full integration of voice, video and data communications.

SIP trunking: significant, diverse benefits

As major carriers have increased SIP trunking availability globally, it has become a strategic technology that companies are using to simplify their network architectures and reduce costs. Recent studies and Avaya experience serving global enterprise clients suggest that approximately 30 percent of global organizations have deployed SIP trunking. Market data indicates that by 2015 the number of companies using SIP trunking will surpass those using T-1 trunks.²

¹ For further discussion of the savings potential with SIP trunking, please see “Avaya SIP Transformation Services, Proving your business case for SIP-enabled technologies,” http://www.avaya.com/usa/resource/assets/brochures/SVC485%20SIP%20EIS%20Brochure-F2.pdf.

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SIP trunking reduces costs in several ways, including consolidation and simplification of voice architecture, reduced toll and long-distance usage costs, increased trunk utilization resulting in reduced trunk quantities, and flexible capacity during times of high call traffic. Furthermore, by aggregating trunks at a centralized location, companies can create economies of scale and significantly increase utilization efficiency. A SIP trunk is highly efficient compared to a TDM trunk, because unallocated bandwidth is dynamically allocated for other uses and applications. As a result, companies no longer pay for idle bandwidth.

In addition to cost savings, SIP trunking enables integration, consolidation and improved management of corporate applications, including PBX servers, voice mail and interactive voice response (IVR) systems. SIP trunking eases administration of system management and contact center reporting, and it also facilitates business continuity, disaster recovery, call routing flexibility and workflow load balancing.

Extending and amplifying the benefits

With SIP trunks in place, an organization can move to the next steps in SIP transformation: integrating facilities, consolidating hardware and turning communications endpoints into SIP connections. While these initiatives may proceed sequentially or concurrently, integrating facilities with SIP can generate quick savings to help fund the other elements of the transformation.

Integrating facilities

Consider the example of a corporate enterprise with 50 locations dispersed around the country, or the world for that matter. Each of those locations currently has voice-dedicated TDM circuits for its telephone system and data circuits to and from its data center and the Internet for corporate applications. The enterprise incurs the cost of both the voice and data circuits.

SIP-enabled architecture can provide immediate cost savings by reducing and/or eliminating the need for the TDM circuits. Subscribing to SIP trunking on the data network provider’s Multi-Protocol Label Switching (MPLS) network allows consolidated digital transmission of all voice, video and data services. All internal telephone calls from one location to another that previously incurred long-distance charges, anywhere in the world, now use the MPLS network between locations rather than the TDM circuits.

3 Some countries currently restrict access to VoIP and SIP trunking deployments.
Consolidating and reducing the number of systems can not only reduce costs but also improve overall service quality. Maintenance and support can be more consistent, as different vendors, a broader range of technical skills, and multiple maintenance contracts are no longer needed to support the different systems.

Cost savings will vary, of course, depending on the number and nature of countries where an enterprise operates. However, overall savings from eliminating TDM circuits between locations, as well as reducing long-distance charges, can be conservatively estimated at 20 to 50 percent. This also takes into consideration reduced trunk requirements due to virtual workers and mobilization of the workforce.

Consolidating hardware

As a result of centralized SIP trunking, companies can take the opportunity to consolidate hardware. SIP trunking enables the data center to begin handling outbound and inbound calls, which can be routed to the 50 locations in our previous example through the MPLS data network.

Along with SIP trunking, SIP-enabled communications platforms are deployed, typically one each in two redundant data centers, allowing substantial hardware consolidation. An extensive inventory of equipment across the 50 locations can be eliminated, including standalone phone systems, voice mail systems, contact center adjunct systems, and IVR systems at each location, in addition to associated TDM circuits.

In many organizations, the legacy voice systems employ outdated technology, cannot be expanded, and carry high maintenance and support costs. If the enterprise has grown through acquisitions, a variety of system types may be in place. Consolidating and reducing the number of systems can not only reduce costs but also improve overall service quality. Maintenance and support can be more consistent, as different vendors, a broader range of technical skills, and multiple maintenance contracts are no longer needed to support the different systems (if support is available at all), particularly for older systems.

To the extent that existing, perhaps incompatible, phone systems are retained as part of a phased migration, the session management capabilities of the SIP communications platform can tie the systems together to maintain a seamless experience across voice, video and data communications. All calls come into the central SIP communications platform and, based on their direct inward dialing (DID) characteristics, are routed to the right office, regardless of which communications platform is in use.

Avaya consulting analysis experience with multiple clients.
Turning communications endpoints into SIP connections

“Communications endpoint” is a decidedly impersonal way to refer to any person, but it is a useful moniker when contemplating the potential of SIP transformation. After all, the purpose of communications is to connect people, so a user (or endpoint device) is a vital component of the equation.

SIP provides users, for the first time ever, with the ability to engage in a truly transparent multimedia experience across voice, video and data communications channels. SIP also enables “presence,” giving users the ability to know whether people are available to engage and across what channels. Concurrently, users now have an unprecedented array of communications devices, including desk phones, smartphones, computers and tablets, to leverage equally in their communications domain.

SIP’s ability to provide a full multimedia experience across device types opens the door to a new framework for deploying technology based on user segmentation. For example, a branch office worker may need advanced desktop communications capabilities, including multimedia messaging and conferencing. A mobile worker may need full voice, video and data capabilities on a smartphone. A personal assistant may require a central answering position with quick directory search capabilities and a visual interface to keep track of an executive’s call status and location.

Whatever the users’ responsibilities, SIP enables an organization to categorize workers by their roles, outfit them with the devices they need, and create a seamless experience for both workers and customers regardless of the device employed. The configuration is no longer “we have 200 people, so we need 200 16-button on-premise phones.” Depending on the worker’s requirements, an eight-button phone may suffice. Or, no on-premise multi-line phone at all may be needed, as the worker’s requirements can be met with just a smartphone or a tablet.

Capitalizing on SIP’s potential

For organizations whose business strategies include striving for a unified communications and collaboration framework to support their workforce, SIP is the most transformative technology to arrive in the business communications marketplace in many years. SIP is ushering in a new era of seamless communications across all forms of media and all types of devices.
SIP trunking is the first step to expand the benefits of unified communications and collaboration beyond the borders of the enterprise. But until now, the business drivers for SIP trunking have revolved around cost reduction through:

• Aggregation of disparate TDM trunks with consolidation into centralized locations.
• On-net calling through the MPLS data network, thereby reducing long-distance charges.
• Reduction of support and maintenance costs through hardware consolidation.

The next steps of SIP transformation offer even greater benefits, including:

• Mobility and presence support—integrated unified communications.
• Business continuity and disaster recovery—flexible call routing via SIP trunks and alternate carriers.
• Flexible bandwidth capacity for peak call volumes during seasonal or operational requirements.
• Virtual numbers—ability to establish local presence without toll-free numbers.
• Intelligent SIP endpoints—anytime/anywhere intelligent applications access.

So while cost savings are a start, the performance and productivity benefits available through continued SIP transformation hold great promise for years to come.

Learn more
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