TATA CONSULTANCY SERVICES

Enabling Next-Gen Unified Communication with SIP Trunking

Abstract

Competing in a dynamic, cutthroat marketplace, companies recognize the need to enable real-time connectivity and collaboration across the value chain, for enhanced employee productivity and operational efficiency. Accordingly, the conventional trunk call paradigm is undergoing a transformation, with telecom operators helping enterprises transition from legacy network to VoIP. By converging voice and data traffic over a single network, the VoIP technology promises to consolidate infrastructure and cabling systems, streamline maintenance workflows, and rationalize subscription fees.

Going beyond pure-play SIP trunking, companies are collaborating with communications service providers (CSPs) to roll out several value-added services (VAS) on top of IP-driven, long-distance calling. Key contours of this envisaged converged communication system include unified communication (UC), integration of video and tele-presence terminals with IP PBX, and convergence of landline and mobile telephony channels.

By provisioning SIP trunking and related VAS, CSPs will help organizations effectively manage voice, data, and Internet traffic, without hindering the quality of service (QoS). This will pave the way for telecom operators to diversify revenue streams and monetize SIP trunking based services, substantially lower service deployment and delivery costs, and address the operational challenges related to network traffic by optimizing network resources

Enabling Digital Transformation with SIP trunking

As businesses worldwide pursue digital transformation, the notion of enterprise communication is also undergoing a fundamental change. Aiming to reduce operating costs and boost employee productivity, companies are seeking next-generation solutions that can foster real-time, on-demand connectivity and collaboration among employees and partners.

For organizations with a large geographical footprint, long distance calls remain critical as they look to drive effective coordination among workers. Conventionally, such businesses have managed voice and data networks separately, leading to the creation of multiple infrastructures and cabling systems, subscription fees, and maintenance workflows. This in turn has meant increased capital and operating expenditures, as well as sub-scalable and inflexible communication setups, for these organizations.

Recognizing this problem, telecom operators are now increasingly rewiring their trunk call architecture. As they expand their SIP networks, several communications service providers (CSPs) are also phasing out ISDN/PRI services.

And, enterprises are certainly putting their money where their mouth is. They have been enthusiastically embracing SIP trunking, which lets them connect IP PBX to the public switched telephone network (PSTN) through IP access circuit, eliminating the need for maintaining PSTN circuits.

The growth outlook for SIP trunking, which already accounts for nearly 60% of global network traffic, looks pretty exciting. According to a recent survey of 40,000 IT managers undertaken by the Eastern Management Group, SIP traffic would likely rise by 25% over the next seven years, boosting the size of the market from over $14bn to $22bn.

Enterprises seek more, beyond plain vanilla SIP trunking

Provisioning barebones SIP trunking will not be enough for telecom operators, as companies demand an array of value-added services (VAS) on top of IP-driven, long-distance calling.

With organizations striving to deliver connectivity for employees – anytime, anywhere, and across devices - CSPs must come up with a converged communication system. Such a setup should be able to effectively handle voice, data, and Internet traffic, without compromising on the quality of service

(QoS), and foster unified communication (UC).

SIP trunking-based UC can significantly improve employee productivity by bundling audio and video conferencing, web collaboration, instant messaging and presence (IM&P), and other vital UC features.

Besides UC, businesses are seeking other next-generation network (NGN) services driven by IP multimedia system (IMS), such as integration of video and tele-presence terminals with their IP PBX. Companies also want to integrate the landline and mobile telephony channels, so that PBX, mobile and PC soft phones can all share the same number and a single voicemail box.

Adoption challenges

Telecom operators realize the lucrative opportunities for top and bottom line expansion, if they can roll out differentiated, higher-margin services on top of SIP trunking for enterprises. However, most of them–the small and medium size carriers, in particular–are struggling to integrate UC and other services like IPTV and VoD with their SIP trunking solution.

Also, there is a widespread inaccurate notion among network and sourcing professionals that upgrading legacy PBX is a prerequisite for migrating from TDM to SIP trunking. This wrong assumption means many organizations refrain from even exploring SIP trunking and related value-added services. CSPs therefore need to drive awareness across the enterprise landscape that SIP trunking services can be integrated with legacy PBX systems through enterprise media gateway devices. By helping organizations understand that they can harness VoIP while continuing to use existing telephony platforms, CSPs can grow their SIP trunking business.

Another notable pain point concerning the adoption of SIP trunking is the unavailability of adequate WAN bandwidth–with the desired quality of service–for enterprise voice services.

Moreover, many companies do not have experienced in-house talent to manage the intricacies of VoIP and IP data networking. This is where telecom carriers can offer managed services to mitigate deployment risks, and define the design requirements in a collaborative manner.

SIP trunking can deliver wide-ranging gains for enterprises

By rolling out unified communication and other services on top of SIP trunks in an end-to-end IP environment, companies can

reap multiple benefits. First, they can substantially lower their total cost of ownership (TCO) by reducing the telecom invoices incurred in ensuring voice transport among offices spread across locations. Adopting a converged, IP-based platform for voice and data traffic will also bring down capital expenditure over both short and long term.

Second, SIP trunking will help organizations enhance the productivity of their employees by empowering them to connect to all their phone numbers remotely, through features such as call management.

Third, by allowing a single number to be registered against several devices, the technology–through features such as web-based click to call–can make staff accessible to customers on demand.

Fourth, SIP trunking and VoIP access services can provision an enhanced level of flexibility that is simply not available in conventional TDM and PSTN offerings. By removing the physical limitations imposed by older services, SIP trunking can pave the way for increased network freedom, which is crucial for any organization's disaster recovery plan. Under the IP-driven communication setup, administrators can swiftly redirect voice to alternative endpoints in case of an outage, where primary nodes are unavailable.

Fifth, elevated network freedom will allow enterprises to exercise better control over their voice services. Through web-based portals, their IT administrators can dynamically orchestrate concurrent call routes, shift users and phone numbers across locations, and manage a shared pool of local- and long-distance minutes.

Sixth, companies that migrate from legacy TDM to SIP trunking for higher reliability and QoS can provision customer-centric support services to bolster their brand reputation.

How can CSPs create value for themselves?

As far as CSPs are concerned, delivering VoIP-based SIP trunking and related VAS will enable them to unlock new revenue streams and customer segments, and strengthen competitive advantage. To begin with, transporting voice to the same IP-based network infrastructure as data will dramatically lower the service deployment and delivery costs for carriers.

Rolling out SIP trunking will allow telecom carriers to reduce the operational complexities associated with handling network traffic and other communication issues. Plus, the ability to provide premium collaborative and conferencing tools through

cloud-based services will help CSPs differentiate themselves in a cutthroat marketplace.

Conclusion

While they are struggling to remain competitive in an increasingly commoditized consumer market, telecom operators have a real chance to grow revenues and profits in the enterprise segment. Addressing the rising demand of organizations for lower TCO and over-the-top services can go a long way in CSPs translating that promise into reality. SIP trunking, undoubtedly, will be a cornerstone of that differentiated value proposition, wherein telecom operators will strive to facilitate on-demand connectivity and collaboration throughout the organization.

References

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