



GENBAND™

DRIVING THE NETWORK EVOLUTION

IP TRUNKING SOLUTIONS

IP Trunking Solutions including Long Distance Bypass, IP Tandem, and International Gateway

GENBAND's G9™ Converged Gateway and C3™ Signaling Controller enable extensive cost savings by using next generation IP networks of high capacity distributed gateways and centralized call control.



BUSINESS REQUIREMENT

Many service providers have TDM voice networks that include local exchanges or tandem switches, but they also have parallel IP networks for data traffic. Aware of the high cost of maintaining two networks, they are looking for ways to begin converging them together, with the objective of eventually transporting all of their core voice traffic over their efficient IP networks. Anxious for cost savings and new revenue generation while still maintaining control of the network, they are ready to take the first step in this transition.

TECHNICAL CHALLENGE

Core TDM networks can include thousands to millions of trunks for transporting voice between circuit switches. For example, fixed line providers may have large tandem switches that interconnect many local exchange offices. Other providers, like mobile operators, may simply use a mesh of trunks between switching centers. The biggest technical challenge for service providers in replacing these expensive switching networks is finding VoIP control and switching platforms that can replicate their existing TDM network services. These new platforms must provide a full array of advanced routing and termination services – such as least cost and time-of-day routing – to enable network cost savings and new services that justify the migration. The platforms also must support national and international signaling and protocol variants, and provide the assurance of carrier class equipment to replicate the high reliability of their TDM networks.

SOLUTION

GENBAND's G9 Converged Gateway and C3 Signaling Controller are deployed worldwide in IP Trunking solutions – such as replacement of TDM tandem switches with IP Tandems, International VoIP termination services, and Long Distance Bypass. A single centralized C3 system offers advanced routing features and media gateway control to enable the migration of TDM core networks – including both the physical trunks and the tandem switches themselves. Distributed G9 gateways have dual TDM and IP switch fabrics, for low latency, high quality voice services. Operators can now converge voice with their core data network, lowering costs, simplifying their network, and enabling new transport, routing, and subscriber services via centralized IP call control and distributed gateways, with a clear path to IMS.

BENEFITS

- Substantial cost savings from migrating TDM core facilities and switching networks to VoIP
- A wide variety of high value trunking solutions including Long Distance Bypass, IP Tandem, and International Gateway/VoIP Termination
- Advanced routing, translations, and transport – with international TDM and SS7/C7 interfaces and extensive packet protocol support
- Widely-utilized, carrier class, high reliability, and highly scalable platforms supporting millions of busy hour call attempts (BHCA) and geographic redundancy

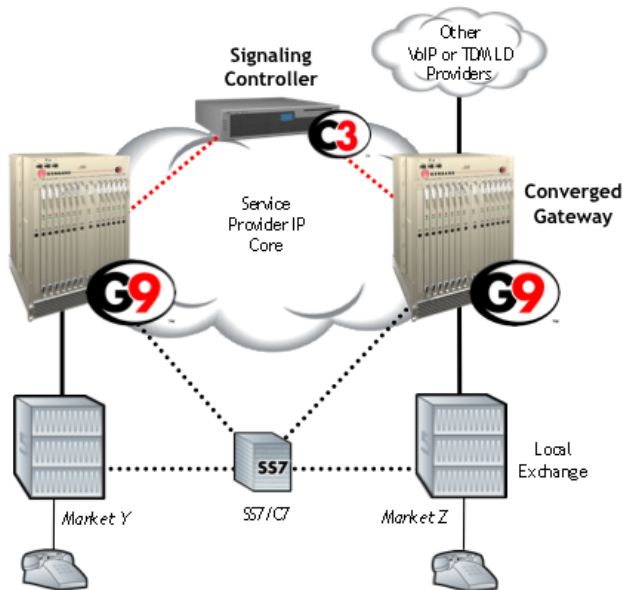


CASE STUDY 1 - LONG DISTANCE BYPASS

Service Provider A operates a fixed line network and a parallel IP backbone in diverse geographic markets. It uses long distance carriers to carry voice traffic between its markets. This increases costs and reduces their control over the network and call quality.

By implementing a long distance bypass plan using IP Trunking between its markets, Service Provider A now transports long distance calls over its own IP backbone, using the Advanced Routing capabilities in the C3 platform. It is also able to provide least cost routing, where it is advantageous to use alternative IP long distance carriers. With the G9 serving as the IP trunking gateway, Service Provider A gains substantial efficiencies by using the platform's comprehensive VoIP capabilities as well as its integrated signaling gateway for consolidating expensive signaling links.

As a result, Service Provider A has a simplified, cost-competitive core network that enables new services and an easier transition to IMS.



CASE STUDY 2 - IP TANDEM

Service Provider B operates a fixed line network that includes a large number of local exchanges connected to a smaller number of aging tandem circuit switches. It also has an IP/MPLS core for data traffic, and wants to migrate its TDM voice core to IP.

Service Provider B deploys a centralized C3 platform with distributed G9 gateways at the local exchanges. In some markets, the G9 - with its TDM switching fabric - easily augments existing TDM tandems; in other markets, the G9/C3 combination replaces TDM tandems with full VoIP switching and trunks, and additional bandwidth transport savings are achieved from the G9 platform's VoMPLS capabilities.

Service Provider B gains multiple benefits: a) all legacy TDM tandem features are supported; b) new IP-based features like sophisticated least cost routing and centralized services like prepaid are provided; c) low cost VoIP peering with other IP-based carriers can occur; and d) core TDM switching, transport, maintenance, and lease costs are eliminated.

