GENBAND

DRIVING THE NETWORK EVOLUTION

DISTRIBUTED MSC GATEWAY SOLUTION

Next Generation Solution for Deploying Mobile Switching Centers

GENBAND's G9 Converged Gateway is widely used platform enabling cost-effective, distributed MSC networks with distributed media gateways and centralized mobile call servers.

BUSINESS REQUIREMENT

Mobile operators are under increasing pressure to reduce network costs and provide new services. However, their cost structure is often hampered by Mobile Switching Centers that use legacy switches to carry voice traffic throughout the network. This technology is an outgrowth of older local exchange switching and it is very expensive to buy, operate, and maintain, consuming large amounts of energy and floor space. In addition, legacy MSCs lack a rational migration path through the successive releases of 3GPP upgrades, so they will be discarded as 3G migration occurs.

TECHNICAL CHALLENGE

As mobile operators expand their networks, they are faced with the decision to continue deploying legacy MSCs or move to new mobile NGN technology, often referred to as 3GPP R4/R5 or CDMA/LMSD. However, many operators are not fully prepared to upgrade their entire network to meet the 3G requirements, yet they want to take advantage of the CapEx/OpEx benefits of softswitching and NGN. Operators also want to deploy networks that are long lived and that have the flexibility to progressively move through 3G transitions from TDM to TDM, TDM to packet, and packet to packet, ultimately realizing the Long Term Evolution (LTE) of the network.

SOLUTION

GENBAND's G9 Converged Gateway is the latest generation of technologically advanced switching platforms, enabling efficient distributed MSC gateways in softswitched/soft-MSC deployments. Fully open standards-based, carrier grade, supporting all relevant codecs and interfaces, and providing valuable functions like an integrated media server and signaling gateway, the G9 operates effortlessly with NGN call servers in both 2G and 3G implementations. The G9 provides the complete range of access and trunking interfaces as well as simultaneous femtocell/FMC features, and it enables a seamless migration path to IMS and LTE.

BENEFITS

- Reduced CapEx and OpEx in the mobile core
- Cost-effective means for deploying new markets and efficient replacement or augmentation of legacy MSC networks
- Optimized for 3G and IP, with industry-leading capacity/footprint density
- Dramatically simplified, open standards-based architecture for complete interoperability
- Reduced complexity and a lower cost network resulting from a single network element that provides both distributed MSC and femtocell/WiFi gateway capabilities

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CASE STUDY 1 - DISTRIBUTED MSC

Mobile Operator A has a growing network comprised of expensive legacy MSCs. Pressured from multiple operators in its markets, it wants to cut costs in the current network and at the same time deploy long-lived NGN technology.

Mobile Operator A implements a Distributed MSC Gateway plan. For new markets, a centralized mobile call server is used with distributed G9 platforms, instead of legacy MSCs. It also begins to replace existing MSCs with G9 gateways, utilizing the mobile call servers for call control.

By using the G9 platform as a Distributed MSC Gateway, Mobile Operator A substantially reduces its cost for new deployments and also creates a lower cost network for existing markets. In addition, it now has deployed technology that will be long-lived as the network moves through 3G and 4G evolution.

CASE STUDY 2 - EXPANDED FMC FEATURES

Mobile Operator B has a diverse network of 2G and 3G deployments. It wants to standardize on switching technology as well as attract new subscribers with advanced "sticky" services like femtocells/WiFi.

Mobile Operator B implements a comprehensive Distributed MSC plan. Because this solution is backwardly-compatible to 2G networks, Mobile Operator B is able to convert its 3G markets and those markets that are still 2G-based to softswitched/mobile NGN networks. It is also able to use its G9 gateways for packet-to-packet switching in its emerging femtocell/WiFi FMC deployments.

As a result, Mobile Operator B is now able to compete more effectively by enabling a successful Distributed MSC solution in all of its 2G and 3G markets. In addition, use of the same G9 platform for femtocells/WiFi lowers its network costs while growing revenues and improving stickiness.