



GENBAND™

DRIVING THE NETWORK EVOLUTION

NETWORK SURVIVABILITY - EMERGENCY STANDALONE

Replace and Consolidate Class 5 Local Exchange Networks while Continuing to Meet Service, Reliability, and Public Safety Mandates

The G6® Universal Gateway and G2® Compact Gateway enable Class 5/Local Exchange replacement and provide key Emergency Standalone Services to ensure network survivability to both legacy and broadband access equipment.



BUSINESS REQUIREMENT

Service providers are interested in reducing OpEx and simplifying their networks by consolidating multiple Class 5/Local Exchange switches onto a single softswitch for call control. With network consolidation, many of the former Class 5/LE switching locations would no longer have their own call control equipment, but would have gateways access equipment. An obstacle to being able to consolidate networks in this fashion has been the practical and mandated requirement to continue to provide the same level of service, network survivability, reliability, and public safety that is being provided in the current Class 5/LE switch network.

TECHNICAL CHALLENGE

Successful network consolidation requires that the gateways be able to support Emergency Standalone (ESA), B911, and E911 if the communications path to the distantly located softswitch is temporarily lost.

While a few gateways support capabilities such as GR-303 and V5.2, support for Emergency Standalone Services including both B911 and E911 is rare. In some instances, service providers have been forced to purchase and deploy additional softswitches in former Class 5/LE switching locations that had been targeted for network consolidation, in order to continue providing the mandated level of reliability and public safety.

SOLUTION

GENBAND's G6 and G2 gateways provide Packet Line Gateway (PLG) capabilities along with ESA switching to ensure network survivability. The G6 and G2 can be hosted by virtually any standards-compliant softswitch and serve as ESA control points for GR-303, TR-08, and V5.2 DLCs as well as broadband access platforms such as MSANs, BLCs, and IP DSLAMs. Former Class 5/LE switches can thereby be displaced by the G6 or G2 and these locations can be hosted by a distantly located softswitch.

ESA is integrated into the G6 and G2 gateways. The G6/G2 monitors the call control from the softswitch, and when the softswitch is not available, the G6/G2 takes over call control. Current calls stay up, and new calls can be made within and among access platforms attached to or monitored by the G6/G2. In ESA, the G6/G2 support B911, E911, and local calling. When softswitch communications are resumed, the G6/G2 hands call control back to the softswitch.

BENEFITS

- Allows multiple Class 5/LE switches to be consolidated onto a single softswitch platform while continuing to provide local calling, B911, and E911 during ESA conditions
- Fully integrated into the G6 and G2; the G6/G2 can be logically partitioned to allow multiple communities with different emergency contact numbers
- Provides ESA capabilities to both legacy (TDM) and broadband access platforms
- Not proprietary to a particular access vendor's platform



CASE STUDY - NETWORK CONSOLIDATION WITH ESA SURVIVABILITY

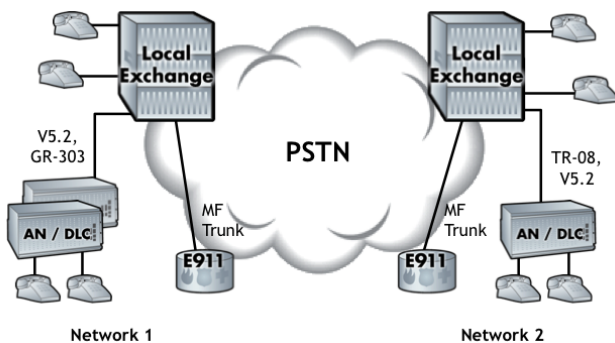
Service Provider A has a network of multiple Class 5/LE switches serving different geographical areas. These networks operate as separate entities and are interconnected via the PSTN. Each network connects to local E911 centers. Since these networks are self-contained, survivability and ESA are built into the network. Local lines are served by the proprietary local line frames of their switch vendor. Remote locations are served by DLC/AN equipment – such as GR-303, V5.2 or TR-08. The company wants to migrate to softswitch IP call control and collapse some of the local Class 5/LE switches onto a single softswitch. However, since the softswitch will be distantly-located from most of the local switching networks, the requirement to provide local calling, public safety, and emergency calling services if the communications path to the softswitch is lost has been identified as a key decision criteria in their network consolidation plans. This criterion is driven from both practical and regulatory requirements.

Service Provider A has decided to implement their network consolidation plans by deploying a single softswitch and multiple G6 or G2 gateways at the former Class 5/LE switching locations. The proprietary line frames are replaced with BLCs or MSANs, and the existing TDM (GR303, V5.2, TR-08) DLCs/ANs are hosted by the G6s and G2s. The G6 and G2 platforms provide the required Emergency Standalone capabilities including local calling among the “subtending” DLCs/ANs and monitored BLC, and/or MSAN equipment as well as B911 and E911 services.

In addition, the G6 and G2 platforms provide trunking gateway capabilities including CAS, IMT, and PRI trunking, so that Service Provider A did not need to purchase separate trunking gateways from its softswitch vendor. Because the G6 and G2 platforms provide call switching capabilities during ESA conditions, they can be classified as network switching elements for NECA settlement purposes.

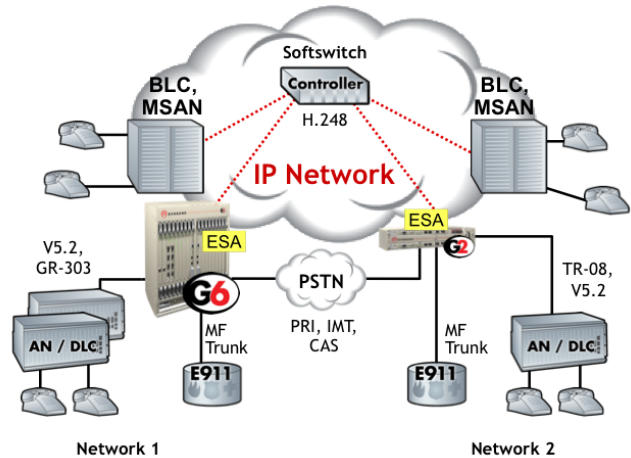
STARTING POINT:

Legacy TDM networks with multiple Class 5 exchanges.



NETWORK CONSOLIDATION WITH G6 AND G2:

Class 5 switches are displaced by a single softswitch. Former Class 5 offices are displaced by G6 & G2 gateways with PLG, ESA, and trunking. Proprietary line frames replaced by broadband access platforms.



G6 AND G2 TAKE OVER SWITCHING AND CALL CONTROL DURING ESA:

G6s & G2s provide local switching to and among legacy and broadband access platforms if connectivity to the softswitch is lost. G6s & G2s also provide subscriber connectivity to E911.

