

Telephony Preference Schemes Automation

The Challenge

Managing a large public telephony network with a diversity of switch types can be a challenge under normal circumstances. In an emergency situation, this task can become daunting: national or local traffic volumes increase dramatically, causing congestion and loss of service. Under these circumstances priority must be given to emergency and governmental agencies.

In order to protect the network, operators need to block phone calls to the area affected by the emergency. This is done by implementing a process called call gapping to selectively block incoming traffic to the switches associated with the local emergency services. Call gapping therefore ensures that these switches will not be overloaded, hence protecting the local network.

Call gapping changes need to be made rapidly on a large number of diverse equipment, often with completely different command sets, and the changes must be constantly monitored and adjusted as the situation changes. The customer's previous home-grown scripting environment simply did not give them the required level of real time control and visibility.

The Automation Solution

The call gapping automation provides the ability to implement and manage Telephony Preference Schemes (TPS) via a lightweight GUI to control the automation activities, which in turn implement call gapping commands directly on the network switches.

As soon as a TPS event occurs the operator simply opens the GUI and enters the first few digits of the telephone number in the affected area. The automation then queries local databases to identify which switches in the network provide service to lines in the affected area (target switches) as well as all feeder switches connecting to the target switches. The user is then presented with a dynamic display of switch interconnections (trunks) including their current loadings.

The user can then select the percentage call rejection (gapping) to be applied to all the feeder switches. Automation sequences will immediately implement these measures by connecting to the affected switches and performing the necessary instructions. These settings can be adjusted in real time across any desired switches as the dynamics of network loading change.

All actions are continuously logged and on conclusion of any TPS event the measures can be deactivated with a few mouse clicks.

The Benefits

The automation forms part of the vital public service which telephony must provide during emergencies.

The solution simplifies what is a complex activity even under normal operating conditions. It enables relatively unskilled users to be confident of managing these situations, by ensuring that the correct switches and associated trunks are automatically identified, and that all command actions are implemented rapidly, accurately, and automatically on the network switches.

GUI integration provides operators with real time status displays and enables them to focus on managing and responding to the dynamics of the situation. It removes the distracting complexity of activities such as looking up routings and entering a variety of syntactically sensitive commands on numerous devices during a critical operational period.