

The Trans Group: Clear Roads Using 3CX and Grandstream



Challenge

Trans Group needed a reliable VoIP system capable of sustaining their high-call volume needs with 100% reliability at all times

Solution

Established a reliable network that sustains high-call volume needs and offers one centralized solution for various locations

Value Created

- ◀ Delivers powerful VoIP service that is reliable and efficient
- ◀ Created a system that is scalable and future proof
- ◀ Delivers innovative IP technology through Grandstream's IP phones

Trans Group

The Trans Group is one of the largest school and transit transportation companies in the greater New York City region. They transport over 35,000 children every year and operate a fleet of over 1,000 school buses. A recognized leader in the industry, The Trans Group has won the Distinguished Service Award and Contractor of the Year awards multiple times as well as a Silver Level Green Fleet Award, all given by the National School Transportation Association (NSTA). Their aim is to provide the safest and most reliable transportation possible and doing so requires a complete phone system that will never break-down on them. Every day, families place their trust in The Trans Group and The Trans Group has, in turn, placed its trust in 3CX and Grandstream.

Seeking a High-Call Volume System for Multiple Locations

The Trans Group's first experience with VoIP was almost their last. "Our previous telephony partner installed a system that simply didn't function properly. It was unreliable and that is something our business simply can't afford," said Rob Dalton, Director of Information Technology for The Trans Group. Initially believing their only option was to return to their previous analog system, they reached out to Charles Ambrosecchia at SigmaVoIP for a consultation.

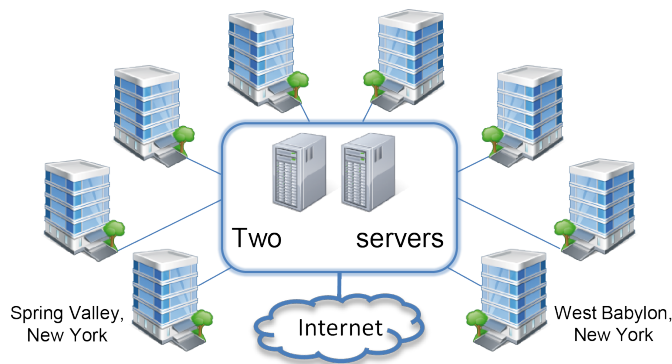
Mr. Dalton had eight different systems and multiple locations served by their previous VoIP solution. After discussing the company's needs with the usual industry giants, Mr. Dalton turned to SigmaVoIP with a relatively short list of mandatory features. The most important feature to them was guaranteed availability. Dispatchers at The Trans Group receive over 3,500 calls per week from both school administrators and parents, requiring that the system be available at all times. Further, all calls needed to be load balanced across locations, in the event of a sudden influx of calls. The next requirement was simple: straightforward management of the new system. Fortunately, 3CX's extremely intuitive and easy to navigate interface coupled with the plug-and-play capability of Grandstream phones easily addressed this requirement. Scalability was a concern as well because The Trans Group is constantly re-arranging and expanding and short deployment time was key. Lastly, audio quality was also of great concern.

A Network that Delivers Availability

Each location was connected through multiple T1 lines and the network relied on a Sonicwall firewall partly managed by the data provider. To create a true High Availability system, the existing routers and dedicated lines were replaced with Verizon FiOS and Cablevision Optimum broadband service which was only a fraction of the previous cost and old routers were replaced with new ones which could provide advanced Quality of Service (QoS) and no annual fees. The Trans Group had a solid virtualized environment powered by VMware so Sigma VoIP recommended deploying two 3CX servers to provide service to the two regions. Each server is capable of functioning as the primary server for its own region as well as a backup server for the locations served by the other server.



To add redundancy to the infrastructure the design of the network and infrastructure had to be completely carrier and media agnostic. The routers at each regional office offer the option of also establishing connectivity via a 3G or 4G USB dongle.



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Rob Dalton
Director of Information
Technology
Trans Group

Grandstream's GXP2100 IP Phone

The new network infrastructure meets N+2 redundancies and is self-healing. The Grandstream GXP2100 was selected as primary endpoint, the Grandstream GXV3140 was selected as the primary video phone and the receptionist desk was equipped with the Grandstream GXP2120.



Grandstream phones have the unique ability to automatically detect a PBX failure and immediately register to the backup server. Then, once the primary server returns online, the phones will switch back automatically and seamlessly. Mr. Ambroseccia also recommended Grandstream phones as he believes they offer the highest degree of reliability and excellent audio capabilities, including HD audio availability. The actual phone roll-out was very quick thanks to the 3CX plug-and-play capability and after carefully planning the allocation of extension, IVR, ring groups and queues the system was up in no time.

Solution: A Reliable and Powerful VoIP System

After two years on their new 3CX/Grandstream system, it has already survived multiple natural disasters. The network exercised its self-healing design on many occasions and has never gone down, while local analog customers unfortunately lost service multiple times. Although the choice to rely exclusively on SIP trunks & IP Telephony and completely disconnect from the traditional analog phone network caused initial hesitation, Mr. Dalton of The Trans Group said "our new phone system has been better than I could have imagined." The Trans Group's current system boasts unparalleled reliability, increased network performance by ten-fold or more all while reaping 70-80% operating savings from their previous system.

