State of South Carolina - Palmetto 800 System Network Maintenance

Location:
South Carolina, USA

Business Needs:
A statewide public safety communications system supporting interoperability among state and neighboring agencies.

Customer Challenge

The State of South Carolina had a need for on-site system support for its statewide P25 system. This system, known as Palmetto 800, is an interoperable public safety communications network owned and operated by Motorola Solutions that covers the public safety users in the entire state of South Carolina and portions of Georgia. The network has over 26,000 local, state and federal Public Safety and Public Service users, as well as direct interoperability with an additional 15,000 private system users.

Customer Profile

Nestled on the East Coast of the United States, the State of South Carolina features over 2,800 miles of coastline and a total area of over 31,000 square miles. With over five million residents, the state ranks 23rd in total population and 19th in population density of the 50 states. With an ever growing population, the State of South Carolina needed support to maintain its interoperable public safety communications network.

Commdex Solution

- Commdex provided on-site system support services for monitoring, operation and management of a robust network statewide.

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Commdex Roles

Commdex provided on-site system support services for monitoring, operation and management of Statewide voice and data network and network elements for 76 site wireless communications system with 30,000+ user devices. Our responsibilities include monitoring network surveillance systems with 110 computer consoles and ensuring response to alarms and error conditions within 2 hours, providing direct support to internal and external customers, and configuring and troubleshooting IP networks.

Network Administration

Commdex assisted Motorola with 24x7x365 network monitoring. Our Network Administration responsibilities included: Operate ZoneWatch and UNC Wizard software to go into sites and position channels in service mode as needed. Provide remote monitoring activities through MOSCAD software to monitor the entire site and hardware problems or environmental sensors (smoke alarm, power failure, door alarms, etc.). Monitor IP addresses and contact servers and routers to see errors and provide alerts for system issues. Use Voyence as the network control manager to view circuits established through T-1 lines. Troubleshoot network issues and utilize ArcaDACS software to determine if microwave or T1 links are generating errors. Perform site management activities including coordination of site visits and inspections. Ensure that the system is functionally operating by checking for system failures and diagnosing system issues that arise.

System Operational Support

Commdex was tasked with providing operational support for the Palmetto 800 system. Our approach for operational support on this system was divided into the Helpdesk (Tier1 Support) and technical support (Tier II/Tier III support) to effectively maximize customer satisfaction and first call resolution rates. The Helpdesk Tier 1 Support provided the first contact with the user base, conducted an initial needs analysis, classified the call (incidents and service requests), closed issues that can be resolved using the incident management checklist (contained in the Support Knowledge Base), and made an assessment as to whether the issue can be resolved on-line (by Technical support (Tier I/II support) or the issue requires a follow up on-site response. The guideline allowed a maximum 10 minutes for the Help Desk Tier I support to correct the issue and or assist the customer with any outstanding concerns. Technical support levels (Tier II/Tier III) provided more complex technical support for incidents that can't be resolved remotely. Some of the operational support tasks conducted by Commdex personnel included:

- Operate ZoneWatch software to troubleshoot channels and solve audio issues through capacity to see radios or talkgroups on that channel. Technicians maintain integrated trunking and conventional resources with backup capabilities and audio logging of directed channels.

- Provide logging system design and implementation of server and client locations, including mapping of logged resources, archiving of recorded radio traffic and upgrades to the systems.

- Provide operational assistance to functional users and correct or complete trouble tickets and service/work orders. Solicit customer input and feedback.

- Provide customer support and training for over 500 agencies to educate users about radio capabilities and provide interoperability training.

- The Commdex team had numerous responsibilities to ensure that the system functioned properly, even during major disasters. The team received updates from emergency divisions, notified all technicians and adjusted schedules as necessary.

System Maintenance Support

Commdex provided system support services for the voice and data network with 76 site locations and 110 computer command/ control consoles distributed across the state, connected switches and interoperability gateways. Commdex personnel provided support services to the system to allow normal day to day operation including:

- Troubleshoot customer issues, including audio complaints, and dispatch technicians for audio tests and site visits when system issues are detected.

- Provide inventory management of radios to determine location, locate lost or stolen radios, add/delete radios from system, and receive spare parts for system component repair or replacement.

- Perform Asset Management of spares and repaired equipment to include shipping, receiving and processing tasks.

Commdex personnel are Motorola-trained and certified and therefore are well versed in recommended preventive maintenance procedures for all system components. Our technicians created preventive maintenance checklists, and handled any consumable parts replacement, servicing, calibration, and software updating as needed and recommended by equipment manufacturer guidelines. Other routine maintenance tasks included:

- Ensure system databases are properly backed up.

- Monitor and ensure that repaired equipment and other critical site components are running properly and provide corrective measures if necessary.

- Schedule radio network and devices maintenance with technicians throughout South Carolina.

Performance and Maintenance Status Reporting

Commdex provided regular reports to the Palmetto 800 and customer teams detailing the performance of the network, maintenance issues and status such as:

- Perform periodic reports of trouble tickets, service/ work orders and system and equipment reports to identify any trends.

- Prepare regular performance metrics of system call activity, busies, emergencies, etc.

- Contact customers to report site issues and provide updates via SMS messaging.

Rigorous preventive maintenance and monitoring systems allowed the team to proactively minimize problems, even before they occur. During this period, the system had no outages related to system or component failures.
