Course Name: Improving Quality on VoIP Networks

Course Overview:
This course provides an overview of VoIP technology, equipment, and quality parameters associated with VoIP networks. The class will also discuss protocols used in implementing VoIP services. Students will learn how to ensure the highest Quality of Service (QoS), establish a baseline, and how to maintain and troubleshoot VoIP services on a data network.

Course Length: 2 days

Who should attend?

- Field Service Technicians
- Field Engineers
- Managers/ Field Supervisors
- Design Engineers
- Electricians
- Managers or Supervisors

You will learn:

- VoIP concepts
- Differences in network types
- Troubleshooting
- Packets, addressing, and design
- VoIP protocols, signaling, voice streaming, and CODEC's
- Quality of Service (QoS) parameters and quality scores
- Effective troubleshooting and maintenance
- Network assessment and optimization

Prerequisites: None

Customizable Course: Yes

Course Content:

VoIP Overview

- Data Plane
- Control Plane
- Layers
- Equipment
- Network Layouts

VoIP Quality Factors

- Bandwidth
- Throughput
- Latency
- Jitter
- Packet Loss
- Call Quality
- MOS, PESQ, R-factor
- Mitigating Echo

Quality of Service (QoS)

- Routing
- Filters
- Queues
- Type of Service (ToS)
- Weighted Round Robin (WRR)
- Class of Service (CoS)
- Convergence Considerations

Troubleshooting

- Packet Analysis
- Protocol Decode
- Call Playback
- Test Equipment
- Determining Quality Scores, Latency, and Throughput

Extensive Hands-on Scenarios