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## Quintum Tenor Advanced Administration (3 day)

### Overview

This comprehensive, hands-on, instructor-led training program addresses troubleshooting real life VoIP network solutions. It provides the student with the advanced knowledge and skills required for resolving the most common Tenor communication and VoIP call issues. Students participate in detailed discussions of advanced networking applications combining Tenor MultiPath™ Switches and Gateways, Call Relay, Call Routing Server, and Remote Management Session Server in more complex environments.

### Audience

Network Integrators, Network Engineers, System Engineers, Support Engineers, and Installation and Configuration Technicians

### Prerequisites

Completion of the Quintum Tenor Basic Administration Course (*after January 2006*) or equivalent experience demonstrated by passing the Tenor Basic Administration Challenge Exam with a score of 70% or better.

### Agenda

#### Day One

- Class Introduction and Objectives
- Review of Tenor Architecture
- Advanced CLI Commands
  - Using CMD commands
- Where to start troubleshooting
  - Physical Layer
    - Analog FXS
    - Perform Ring Test
    - Perform Manufacturing Test
  - Analog FXO
    - Perform Dial Tone Test
    - Perform Manufacturing Test
  - Digital
    - Verify LEDs status
    - Check Alarms
    - Verify line state
  - Data Link Layer
    - Digital (Only)
    - Verify line status of Digital Interface (Slot, Device)
  - Explanation of Event Viewer modules and logs
    - SIP
    - PRI
    - CAS

### **Day 1(cont)**

- Using PC Mon
  - Debugging DSP and Voice Quality Issues
- Quintum Logs
  - Suspend task log
  - Reset log
  - Teltrail log
- FAX and Modem Configuration

### **Day Two**

- Connecting to Networks with Multiple SIP Proxies
- H.323 Network Redundancy
- Call Relay H.323 > SIP Translation
- Call Routing Server v1/ v2 (CRS)
  - Overview of CRS Features and Terminology
  - Initial Setup and Administration
    - CRS v1 Front Panel Operation
    - CRS CLI operation
    - Install Call Routing Server Manager (GUI)
  - Basic CRS Installation and Configuration
    - Ingress and Egress Routing Groups
    - Endpoint Configuration
    - Route Directories
  - Configuration of Tenor for External Routing (CRS operation)
  - Debugging Call Routing Server problems
  - Call Routing Server Maintenance
    - Backup
    - FTP
    - Importing & Exporting

### **Day Three**

- Call Routing Server and Call Relay Applications
- Advanced Network Applications
  - NAT IP Lab
  - Testing the VoIP solutions
- Securing Your VoIP Network
- Remote Management Session Server (RMSS)
  - Installation
  - Administration
  - Remote Operation
  - Reading RMSS Logs
- Open discussion of VoIP applications and solutions

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