

Course Name: T1/DS1 and HDSL Installation and Maintenance

Course Overview: This course focuses on an overview of T1/DS1, HDSL, HDSL2 and HDSL4. Special emphasis will be put on network equipment, common applications and maintenance/repair procedures.

Course Length: 2 days

Who should attend:

- Field Service Technicians
- Switch Technicians
- Design Engineers
- Managers/Field Supervisors
- Field Engineers
- Installers

You will learn:

- Understand the basic steps in building a DS1 Signal (Multiplexing, Framing, Coding)
- Set up, operate and interpret results on standard DS1/T1 test equipment
- Efficiently install and test new HDSL systems
- Troubleshoot existing HDSL systems to ensure signal quality
- Effectively work with HDSL providers to ensure faulty systems are restored quickly and new systems are installed with standardized acceptance test.

Prerequisites: Understanding of DS1 transport

Customizable: Yes



Course Content:

Overview of DS1 Applications

DS1 Standards

T1 Basics

- DS1 Network Equipment
- Analog vs Digital
- Multiplexing
- Framing
- Line Coding
- Timing

SLA (Service Level Agreements)

Test Equipment

- Copper Qualification
- BER Testers
- Multi-Functional Test Equipment
- Status Information from Transport Equipment

DS1 Installation and Maintenance

- Qualifying the Loop/Cable

- DS1 Test Access
- Types of Tests
- Monitoring Alarms and Errors
- BERT and Stress Patterns
- Signal Analysis
- Performance Monitoring
- Network Synchronization Testing
- Advanced Service Verification

Overview of HDSL/2/4 Applications

HDSL/HDSL2/HDSL4 Standards

HDSL/HDSL2/HDSL4 Basics

- HDSL Network Equipment
- Conversion Process
- Distances, Parameters

HDSL Installation and Maintenance

- Qualifying the Loop/Cable
- HDSL Test Access
- Types of Tests
- Status and Testing through HDSLx Equipment
- Monitoring Alarms and Errors

