

DCS Fundamentals and Architecture



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Course Length:	5 days
Course Code:	NFSDCS1
Prerequisites:	None however a basic knowledge of digital communications is helpful
Course Overview:	This course is customized to the requirements of each company. A free pre-course analysis can be done to determine network layout, specific equipment, software revisions, and technician knowledge level and management expectations. From this a course outline is submitted for feedback and approval.

** This course can be customized or combined to meet specific system requirements**

Course Outline

DS1 Overview/Review

- TDM
- D4 and ESF Framing
- AMI and B8ZS Line Coding
- T1 errors and alarms

DS3 Overview/Review

- Channelized vs. non-channelized
- M13 Framing
- C-bit Framing
- DS3 errors and alarms

SONET Overview/Review

- Architecture
- Transport Hierarchy
- Framing
- Overhead
- Networks



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Network Equipment Overview/Review

- Terminal Equipment
- Repeaters
- Multiplexers
- Switches
- DCS
- Add/Drop Multiplexers

What is a Digital Cross-Connect System?

- Before DCS
- After DCS
- Advantages of the DCS
- Bandwidth Utilization
 - flavors – Narrowband, Wideband

Vendor Specific Training

- System Features
- System Architecture
- Subsystems, Port Complex, Switching Network Complex, Admin Complex
- Importance of Redundancy
- System Maintenance
- System Diagnostics and Performance Monitoring

Transaction Language 1 (TL1)

- Command Structure
- Command Syntax
- Command Basics
- Syntax Detail
- Common Commands -Vendor Specific
- Output Statements – Vendor Specific