

Course Name: Packet Data Fundamentals

Course Overview:

Packet Data Fundamentals will provide an overview of today's packet data networks. The student will be exposed to transport technologies such as Frame Relay, ATM, MPLS, and TCP/IP Networks. The class will end with a summary of industry trends and a look at future packet data technologies.

Course Length: 2 Days

Who should attend?

- Field Service Technicians
- Field Engineers
- Managers / Field Supervisors
- Design Engineers
- Traffic Engineers

You will learn:

- Difference in Packet switching and Circuit Switching
- Basic Packet Data Requirements
- Advantages of a Packet Data Networks
- Overview of Packet Data Technologies
- Uses for Packet Data Networks
- Why Packet networks are efficient
- Packet Networks designed to transport today's applications
- Label switching

Prerequisites: None

Customizable Course: Yes



Course Content:

Packet Data Overview

- What is Packet Data?
- Packet Switching vs. Circuit Switching
- Packet Data Technologies
- Industry trends that support Packet Data Networks

Packet Data Networks

- Overview
- How Networks are evolving
- Public and Private
- Internet
- Hardware
- Software
- Traffic Control and Verification

OSI Model

- Introduction
- Role of the OSI in Packet Data Networks
- OSI Layers
- Layer 2 and Layer 3 Technologies
- Troubleshooting Network Problems with the OSI

Frame Relay

- Bandwidth
- Frames
- DLCI
- Congestion Control
- Frame Relay Equipment
- Advantages and Disadvantages

ATM

- Bandwidth
- Cell Concept
- Adaptation Layer
- VPI and VCI
- ATM Application
- ATM Equipment
- ATM switching
- ATM compared to Frame Relay

MPLS

- Benefits
- Label Switching
- Encapsulation and Label Stack
- MPLS Paths
- Traffic Engineering
- Quality of Service (QoS)
- Comparison to Frame Relay and ATM

TCP/IP

- Overview
- IP Addressing
- TCP/UDP
- Traffic Delivery choices
- TCP/IP Network Hardware and Software
- IP Routing
- TCP/IP Protocols

Industry Trends for Packet Data

- Enhancements in existing Network Architecture
- Next generation Packet Networks

