

---

# Sycamore Optical Switching – NOC Operations

---

**Course Number:**

201027

**Course Description:**

This course provides the necessary skills for Network Operation Controllers who are responsible for monitoring the status of Sycamore Optical Switches in the network. Through a series of instructor-led discussions and hands-on exercises, the student will learn how to successfully create and use topology maps; manage and monitor network elements; manage alarms; and perform basic problem-solving tasks. SilvxManager will be used during the class to allow students to practice various procedures.

**Prerequisites:**

General knowledge of SONET/SDH, network management, and IP technologies.

**Duration:**

2 Days

**Course Topics:**

Introduction to Sycamore Optical Networking

- The Intelligent Optical Switched Network
- SN 3000 Optical Access Switch
- SN 3000 Applications
- SN 9000 Intelligent Multiservice Switch
- SN 9000 Applications
- SN 16000 Optical Core Switch
- SN 16000 Applications
- SilvxManager

## Hardware Architecture Overview

- SN 3000 Components
- SN 3000 Control Modules
- SN 3000 Line Cards
- SN 9000 Components
- SN 9000 Control Modules
- SN 9000 Line Cards
- SN 16000 Switch Chassis
- SN 16000 Port Chassis
- SN 16000 Control Modules
- SN 16000 Line Cards

## SilvxManager Overview

- Silvx Network Management
- Distributed Architecture
- FCAPS Support
- SilvxOSS
- SilvxManager Architecture
- SilvxManager Software Specifications
- SilvxManager Hardware Specifications
- SilvxManager Hot Standby

## SilvxManager User Interface

- Client Requirements
- Java Requirements
- Accessing SilvxManager
- SilvxManager Online Help
- SilvxManager Login
- SilvxManager User Windows
- SilvxManager Object Tree
- SilvxManager User Profiles
- Adding a Node
- Node Attributes

## SilvxManager Fault Management

- SONET/SDH Alarm Structure
- Alarm Management
- Alarm Status
- Alarm Indicators
- Displaying Alarms
- Network Alarm Table
- Displaying Alarms from a Map

- Displaying Alarms from the Panel View
- Responding to Alarms
- Acknowledge/Unacknowledge Alarms
- Adding Alarm Notes
- Historical Alarms
- Displaying Historical Alarms
- Node Events
- Displaying Node Events

#### Monitoring Network Elements

- Network Inventory
- Node Inventory
- Authentication & Authorization
- User Groups & Profiles
- Accessing Card Attributes
- Accessing Port Attributes

#### Performance Monitoring

- Performance Monitoring Functional Overview
- Section Layer Statistics
- Line Layer Statistics
- Far End Line Layer Statistics
- Accessing Real Time Statistics
- Accessing Historical Statistics
- Threshold Crossing Alerts (TCA)
- Intermediate Path Performance Monitoring (IPPM)

#### Using Maps

- SilvxManager Maps
- Creating a Map
- Displaying Maps
- Map Toolbars
- Adding/Deleting Nodes from a Map
- Modifying a Map
- Submaps
- Adding Trunks/Circuits to a Map

#### Troubleshooting with SilvxManager

- Port Loopbacks
- Initiating Port Loopbacks
- Path Loopbacks
- Initiating a Path Loopback

- Event & Alarm Processing
- Physical Port Alarm Conditions
- Network Failure Scenarios
- Troubleshooting Trunks/Circuits
- Management Connectivity Issues