Adtran University

# SDX 6000 OLT (NMS)

## 3 days *virtual* or *classroom* training

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Our SDX 6000 Series of software-defined optical line terminals (OLTs) consist of open and disaggregated access devices that support a broad range of PON standards, including 10G Combo PON, XGS-PON, GPON, and 10G-EPON. These devices are built using modern design principles and apply lessons learned from data center networks. This approach is an architectural shift from previous networks that have historically relied on closed, monolithic systems managed by vendor-specific management systems. This evolution enables operators to vastly lower their costs to build, operate, innovate, and grow their networks.

## Objective

This course is designed for those students who will be designing, implementing, and supporting solutions using the SDX 6000 Series of enterprise-class, fully managed Optical Line Terminals (OLTs). This course will include interactive lectures as well as lab exercises presented through our virtual lab environment. Integrated lab exercises are designed to reinforce the class content with installation, configuration, and troubleshooting procedures. After completion of the course, the student should be able to install and maintain the Adtran SDX 6000. To enroll, go to www.adtranuniversity.com.

## Benefits & Audience

- Benefits: To achieve self-sufficiency at installation, configuration and maintenance of the SDX 6000 OLT solution
- Certificate of Attendance
- Class size: 12 students maximum
- Target Audience: End Users, System Engineers, Network Engineers, Value Added Resellers and Distributors

## Prerequisites

SDX 6000 Overview (Self-paced)– students can self-enroll at **www.adtranuniversity.com**

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## Agenda

### Theory/Lecture

- SDX OLT Management Configuration
  - SDX OLTs Overview
  - PON Types & Optics Overview
  - SDX ONTs Overview
  - CLI Modes Overview
  - Restoring Factory Settings
  - Out-of-Band (OOB) Management
  - In-Band Management
  - LAG
  - System Settings (CLI)
- Pre-Onboarding Requirements and Preparation
  - Pre-onboarding CLI Configurations:
    - Dynamic LAG (LACP)
    - ONU Activation Mode
    - SFTP ServerUpgrade Guide
  - Pre-Onboarding GUI Configurations
    - SFTP Server Object
    - Object Creation Options
    - Credentials
    - NTP Server Profile
    - Syslog Server Profile
    - VLAN Name Profile
    - SIP Trunk Profile
    - ONU Upgrade
    - OLT Upgrade
  - Accessing Adtran Software
- A Guide to Mosaic CP Job Types
  - Mosaic CP Jobs – The Basics
  - Preconfigured Job Types
    - Ethernet Loopback Test
    - Port Toggle Test
    - Nightly Backup
    - Upgrade OLTs
    - Upgrade ONUs
  - Software Upgrade Job Lifecycle
  - Creating and Running New Job Types
    - Audit Software
    - PON Port Toggle Test
    - Restore Device Configuration
- Device Onboarding
  - Reviewing Mosaic CP Network Objects
  - The 'rooted-device' & 'rooted-interface' illustrated
  - Describing the 'content provider' & 'generic bundle'
  - Onboarding Review
  - SDX OLT: Onboard-to-Upgrade
  - SDX OLT Software Upgrade Job
  - Deleting the SDX OLT
  - Device Onboarding
  - Changing the auto-activated ONU Naming Pattern
  - Creating the Uplink LAG Interface
- New Object Onboarding
  - Onboarding Review
  - OLT Onboarding w/ Profile Vector
  - PON Interface Types (YANG Model View)
  - Manually Onboarding the Bundle and PON
  - Manually Onboarding an ONU
  - Overview: OLT-ONU Discovery & Activation
  - ONU Management and Control Interface (OMCI)
  - Manually Onboarding the UNI
  - Accelerating Onboarding w/ Auto-Activation Profile Vectors
    - OLT Profile Vector Auto-Activation
    - ONU Profile Vector Auto-Activation
- Services Provisioning and Overview
  - Overview: Pre-configured Service Profile Vectors
  - Creating a Data Service using Orchestrate View
  - Creating a Data Service using Tree View
  - Understanding VLAN Tags (S-tag, C-tag, CE-VLAN)
  - Types of EVCs
  - GEM Ports and T-CONTs
  - Service Summary
  - Service Provisioning Checks:
    - EVC and EVC-Maps
    - Subscriber Profiles
    - Managing the PON Upstream Bandwidth

# SDX 6000 OLT (NMS)

**Services Provisioning and Overview (Continued)**

- Managing the PON Downstream Bandwidth (HQoS)
- Dual-Rate Shapers and HQoS
- ONU Interfaces
- Service Intent
- ONU IP Management
- Creating a Voice Service
- Service Diagnostics
  - DHCP DORA Flow Indicators
  - Packet Trace
  - PON Issues: Verifying Optical Layer
  - Service Troubleshooting Guide
  - OLT Replacement

## Practice/Labs

- Configuration Management
- Pre-Onboarding Mosaic CP GUI Configurations
- OLT: Onboarding, Upgrading, Deleting
- Creating Objects with Device Onboarding
- Manually Creating Objects in Mosaic CP
- Creating a Data Service using Tree View
- Creating a Data Service using Orchestrate View
- Configuring ONU IP Management
- Service Diagnostics

## Contact

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## Ordering Information

| Part Number | Description |
|---|---|
| 1600CSYS6025E | Per Enrollment (Student) |
| 1600CSYS6025C | Per Dedicated course |