



OPENDAYLIGHT BOOTCAMP (ODL101)

Course Syllabus

Course Details

- Duration: 2 Days
- Hours: 9:00 a.m. - 5:00 p.m.

Course Objectives

- Describe the architecture of an OpenDaylight SDN deployment
- Define the key features of OpenDaylight
- Identify suitable use-cases for OpenDaylight
- Implement and use an emulated testbed environment
- Manage Authentication and Authorization
- Configure an OpenDaylight Cluster
- Mounting Netconf Devices
- Working with your first OpenFlow Network
- Be prepared for real-world deployment scenarios

Overview

OpenDaylight Bootcamp covers the critical skills needed to deploy an OpenDaylight-based solution. Training is conducted in a small classroom setting. Students will each be provided with a secure demo/test OpenDaylight environment for intense, hands-on access - initially via GUI-based tools (e.g., DLUX) that leverage students' existing knowledge, then via ssh shell and command-line interaction. We'll cover everything: from architecture and component interaction, through configuration, deployment, tuning, common use cases and troubleshooting - complete preparation for the real-world challenges faced in OpenDaylight deployments.

Target Audience

- Systems Administrators
- Technical IT Professionals

Prerequisites

- Linux command line
- Understanding of OpenFlow concepts
- Understanding of Networking concepts

Lab Requirements

- Laptop with Wifi Card
- Firefox or Chrome
- SSH and SCP Software



Module 1

OPENDAYLIGHT OVERVIEW

Theory

- Overview of project history and releases
- Core projects overview
- OpenDaylight architecture overview
- Available Features

Workshops

- Understanding the classroom environment
- Installing OpenDaylight
- Initial Configuration
- Initial Controller Interactions

Module 2

GETTING STARTED WITH OPENDAYLIGHT

Theory

- How to get started
- OpenDaylight clustering
- Model-Driven Service Abstraction Layer
- Internal datastore
- OpenFlow plugin
- OpenVSwitch concepts
- Mininet overview
- L2Switch Application

Workshops

- Configuring an OpenDaylight Cluster
- Initial Command Line Interactions
- Enabling Required Features
- Launching the User Interface
- Creating an Emulated SDN Network
- Running L2Switch

Module 3

GETTING MORE FROM OPENDAYLIGHT

Theory

- OpenDaylight and AAA
- Introduction to OVSDB Virtualization
- Application Intents and Group Based Policy
- Service Function Chaining
- LISP Flow Mapping
- Virtual Tenant Networks

Workshops

- Advanced AAA integrations
- Creating Virtual Networks
- Working with policies and intents
- Initial Service Function Chaining
- OpenDaylight and OpenVSwitch

Module 4

MORE REAL LIFE USE CASES

Theory

- OpenDaylight and BGP
- Network Virtualization with OpenDaylight
- Protection and Restoration
- Multipathing

Workshops

- IP SDN Peering
- Network Overlays for Multitenancy
- Resiliency in SDN
- Traffic Engineering with Multipath