

MEF-SNCP: MEF Software Defined Networks/Network Functions Virtualization (SDN/NFV)

Duration: 2 Days

Prerequisites:

It is recommended, but not required, that students understand basic routing and switching.

Course Description:

Software Defined Networking Carrier Grade is a two-day instructional course introducing students to Software Defined Networking, controller platforms, governing protocols, and applications. SDN leverages the available standard APIs to fundamentally shift the way traditional networks have been managed.

This course was developed with a focus on the service provider technician as a way to quickly understand what SDN is, what the components of different working SDN solutions are, and where in the market these solutions apply. The focus of this course is vendor neutral.

Course Objectives:

Upon completing this course, students will be able to:

- Define what SDN is fundamentally
- Explain how SDN has evolved into its current applications
- Recognize the emerging SDN protocols and their governing bodies
- Compare SDN and controller-based switching to traditional forwarding models
- Focus on ODL as an open-source solution
- Compare other vendor products from VMware, Cisco, Juniper, and HPE
- Dive into the ODL history, architecture, and feature support
- Explain the Southbound OpenFlow protocol and use case
- Cover Northbound REST APIs access through YANG models and RESTCONF
- Demonstrate practical SDN concepts through hands-on portable virtual labs
- Service Chaining as examples of carrier NFV
- MEF SD-WAN design and review

Target Audience:

The target audience for this class are networking engineers, service provider architect and engineers, and premise technology engineers looking to expand their understanding of SDN/NFV and MEF certification.

Course Outlines:

Module 1: SDN Put Simply

- Defining SDN By the Book
- Governing Bodies

Module 2: SDN Controllers

- SDN Controller Core Capabilities
- > VMware and the Big Three Network Equipment Manufacturers
- > Other Controllers in the Market

Module 3: Controller ODL Releases

- OpenDayLight Release History
- Controller Architecture
- Feature Support Overview

Module 4: Southbound OpenFlow

- Traditional Legacy Switching
- How does running OpenFlow change things?
- ONF and OpenFlow

Module 5: Northbound REST APIs

- Northbound RESTCONF service
- NETCONF and YANG: Yet Another Next Generation
- Postman
- > cURL

Module 6: In this Module, students will discuss:

- Service Chaining
- Scaling Controllers through Clustering

Module 7: MEF SD-WAN Design and Review

- SD-WAN Need to Know Terminology
- > MEF defined SD-WAN Service
- ➤ SD-WAN Overlays