

SDN Overview

eLearning (H5v) | Average Duration: 1 Hour | Course Number: NWV_105



Wireless, Wireline and Cable service providers are on the cusp of a multitude of network and business transformation choices. A good conceptual understanding of the new networking and Wireless, Wireline and Cable service provider business paradigms is essential for professionals in the communication industry. This course provides a high-level view of the impact and benefits of Software Defined Networks, the vision and opportunities created by future provider networks, as well as a number of example of how SDN could be used to provide services in a Transformed network.

Intended Audience

The course is intended for all that are interested in understanding what SDN is and how it will transform the Wireless, Wireline and Cable service provider network over the next few years.

Learning Objectives

After completing this course, the student will be able to:

- Describe the concept of Software Defined Networks (SDN)
- List the key components of the SDN architecture
- Identify possible uses of SDN

Course Outline

1. SDN Overview

- 1.1. SDN: Centralized control, distributed traffic
- 1.2. SDN defined

2. SDN Motivations and Benefits

- 2.1. Motivation for SDN
- 2.2. Potential SDN benefits

3. Routing and Forwarding

- 3.1. Routing and forwarding
- 3.2. Routing in action
- 3.3. Forwarding in action
- 3.4. Control plane and forwarding plane inside a router

4. SDN Principles

- 4.1. The SDN way
- 4.2. The Hybrid way

5. SDN Architecture

- 5.1. SDN architecture
- 5.2. SDN controller for flow rules
- 5.3. SDN switch for forwarding

6. SDN in Action

- 6.1. SDN flow rules in action
- 6.2. SDN forwarding in action

7. Using SDN

- 7.1. SDN: Hybrid approach
- 7.2. SDN: Bandwidth on demand service

8. SDN Challenges

9. End of Course Assessment