

# Welcome to SDN and NFV Technologies

eLearning (H5v) | Average Duration: 1 Hour | Course Number: NWV\_118

Software Defined Networking (SDN) and Network Functions Virtualization (NFV) technologies are reshaping how telecom service providers' networks operate resulting in more efficient operation that reduces costs and increases savings. Together, these solutions allow networks to operate at web-scale and provide customers with unprecedented levels of agility and flexibility.

This self-paced eLearning course provides NFV and SDN frameworks and show how they work together to better serve the customers. It also introduces the role of Orchestration in providing automation of service providers' network and thus delivering service agility and operational efficiency.

## Intended Audience

The course is intended for all audiences that are interested in understanding how SDN and NFV provide optimal network solutions that not only provide customers with key benefits (faster time to revenue, reduced costs and increased customer satisfaction), but also improve the ability to respond to customer demands.

## Learning Objectives

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

- Give examples of SDN and NFV in action
- Sketch an example of an SDN and NFV-based network
- Articulate how orchestration provides improved network management
- Explain how SDN, orchestration and NFV work together to improve efficiencies and the customer experience
- List some of the fundamental shifts due to SDN and NFV

## Suggested Prerequisites

- [NWV\_117] Welcome to SDN and NFV Foundations (eLearning)

## Course Outline

### 1. Today's and Tomorrow's Networks

- 1.1. Complexity of today's service provider's network
- 1.2. Physical and virtual network functions
- 1.3. Conceptual model of tomorrow's network
- 1.4. Key concepts of Software-Defined Network

### 2. NFV and SDN

- 2.1. NFV and SDN working together
- 2.2. NFV
  - 2.2.1. NFV at a glance
  - 2.2.2. NFV in action
  - 2.2.3. NFV framework
  - 2.2.4. Benefits of NFV
- 2.3. SDN
  - 2.3.1. SDN at a glance
  - 2.3.2. SDN framework
  - 2.3.3. SDN controller and apps
  - 2.3.4. Benefits of SDN

### 3. Automating the Network

- 3.1. NFV orchestration at a glance
- 3.2. Dynamic capacity scaling
- 3.3. Service function chaining

### 4. Walkthroughs: Fine Dining and the Network

### 5. Applying SDN and NFV to Tomorrow's Network

- 5.1. New paradigms
- 5.2. Fundamental shifts