

## Introduction to NFV and SDN

### **Course Description**

This course serves as an introduction to the latest technologies to influence mobile service provider networks, namely NFV and SDN. The course will initially outline the driving factors for NFV, followed by analysis of the standardization efforts in place. The NFV Framework architecture will then be examined, including focus on VNFs, the NFVI and MANO. In conclusion, an overview of the concepts and architecture associated with SDN is provided.

This course has no prerequisites.







#### This course will contain the following sections:

#### 1. Introduction to NFV and SDN

#### **Topic areas covered include:**

- NFV Fundamentals:
  - Understanding the Industry Challenges.
  - What is Network Functions Virtualization?
  - Opportunities for Service Providers.
  - NFV Standardization and Development.
- Network Services.
- NFV Detailed Architecture:
  - Network Services, Forwarding Graphs, NVFFG.
  - Interfaces:
    - Vn-Nf, VI-Ha, Os-Ma, Ve-Vnfm, Nf-Vi, Or-Vnfm, Vi-Vnfm, Or-Vi.
  - Virtual Network Functions.
    - VNF, VNFC, SWA, EM.
  - Element Management.
  - NFV Infrastructure.
  - Management and Orchestration.
    - NFVO, VNFM, VIM.
  - OSS and BSS.
- · Implementing NFV:
  - VNF On-Boarding.
  - VNF Instantiation/Scaling.
  - Network Service On-Boarding.
  - Network Service Instantiation.
- NFV Use Cases.
- NFV Deployment Challenges.
- Introduction to SDN:
  - Drivers for SDN.
  - SDN Objectives.
  - SDN High Level Architecture.
  - SDN Deployment Considerations.



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