

## 3-hour SDN and NVF Primer Instructor-led online module

### Course Outline

#### General concepts

1. Abstraction
2. Decoupling
3. Disaggregation
4. Instantiation
5. Virtualization
6. Programmable networking
7. SDN vs NFV
8. Whitebox switching
9. Network overlays
10. Network slicing
11. Service chaining
12. VNFs
13. Orchestration

#### Datacenter virtualisation concepts

1. Flow of data through a Datacenter
2. Datacenter infrastructure
3. Flow of data through programmable, virtualised WAN
4. x86 Datacenter servers
5. Hypervisor
6. Virtual Machines (VMs) vs Containers
7. Docker

#### Business Continuity

1. High Availability
2. Virtual Machine (VM) migration
3. Failover
4. Resource sharing
5. VM resilience

#### Benefits and Limitations

1. Benefits and promises
2. Limitations and potential problems

3. Virtualisation concerns

## Standardisation and guidance bodies

1. ONF,
2. ONF Project (Including CORD)
3. ONAP,
4. OASIS and OASIS TOSCA
5. ETSI,
6. OPNFV
7. ODL

## SDN/NFV Industry

1. Cumulus
2. OpenStack
3. Cloudify
4. OpenContrail
5. Apache Cloudstack

## Exams and certifications

### 1. Professional Exams

- MEF NF Professional Certification
- MEF SDN/NFV Professional Certification
- ONF-Certified SDN Professional Program (OCSP)
- OpenStack Certified OpenStack Administrator (COA)
- Cisco Network Programmability Specialist
- Cisco Datacenter and Cloud certifications

### 2. Industry Accreditation

- ONNFV Verification Program
- ONAP Certification Program

Discussion: Implications of advances of SDN and NFV to network engineering jobs/roles