

Cloud, NFV and SDN in Half a Day

CONTENTS

The course is designed to let the student acquire basic knowledge on architecture, hardware, software, services and development of Cloud Computing technologies. The course walks you through hypervisor virtualization as well as container technology, and explains the difference between the cloud execution environment and cloud management. Telco cloud is discussed in the context of the ETSI NFV standard. The course also covers Software-Defined Networking and describes how NFV and SDN intersects and work together. It is a shorter version of the two-day course “Cloud, NFV and SDN”.

PREREQUISITES

Working knowledge of computer and telecommunications systems.

NOTE: This course is not delivered with the FoldOut methodology.

Cloud Introduction

- What is the cloud?
- Essential cloud characteristics
- as-a-Service models
- Examples of Cloud Services
- Private/Public/Hybrid/Multi-Cloud

Virtualization

- Virtualization and Cloud
- Virtualization benefits
- Distribution of Resources

Containers

- Linux Containers (LXC)
- Docker
- The Cloud Native approach

OpenStack

- Introduction and background
- Components/Projects
- Main Openstack Architecture
- OpenStack in Practice

Network Functions Virtualization (NFV)

- The Telco Cloud
- ETSI NFV Standards
- NFV main architecture
- Official NFV Use cases

Software-Defined Networking (SDN)

- Why SDN?
- Three variations on SDN
 - OpenFlow-Based
 - Control Plane Extensions
 - Overlay Abstraction
- Network Operating Systems
 - OpenDayLight
- OpenFlow
- VxLAN
- The Bigger SDN Picture

Summary