

NFV and SDN for 5G

A 3 day training course



Description

This course provides a foundation in how Software Defined Networks and Network Function Virtualisation will be implemented in a 5G environment. The unique set of challenges of 5G, i.e., the fact the user is wirelessly connected and could be handled by various different transceivers during the course of a live connection, poses specific issues that need novel ways to succeed. It will explain the proposed and suitable solutions for implementing SDN/NFV and MEC into the 5G world.



Key outcomes

By the end of the course delegates will be able to:

- ✓ Describe the use of virtualisation in 5G
- ✓ Compare and contrast hypervisors and containers
- ✓ Describe Software Defined Networking
- ✓ Explain the use of Kubernetes
- ✓ Describe the use of open source software in SDN/ NFV networks
- ✓ Explain the basic concept of MEC



Training approach

This structured course uses Instructor Led Training to provide the best possible learning experience. Small class sizes ensure students benefit from our engaging and interactive style of teaching with delegates encouraged to ask questions throughout the course. Quizzes follow each major section allowing checking of learning.



Details

Who will benefit?

Technical staff working with 5G

Prerequisites

Essential 5G

Duration: 3 days

Customer rating:

New course

Generic training



Generic training complements product specific courses covering the complete picture of all relevant devices including the protocols "on the wire".

"Friendly environment with expert teaching that teaches the why before the how."
G.C. Fasthosts

Small class sizes



We limit our maximum class size to 8 delegates; often we have less than this. This ensures optimal interactivity between delegates and instructor.

"Excellent course. The small class size was a great benefit..."
M.B. IBM

Hands On training



The majority of our courses use hands on sessions to reinforce the theory.

"Not many courses have practice added to it. Normally just the theoretical stuff is covered."
J.W. Vodafone

Our courseware



We write our own courses; courseware does not just consist of slides and our slides are diagrams not bullet point text.

"Comprehensive materials that made the course easy to follow and will be used as a reference point."
V.B. Rockwell Collins

Customise your course



Please contact us if you would like a course to be customised to meet your specific requirements. Have the course your way.

"I was very impressed by the combination of practical and theory. Very informative. Friendly approachable environment, lots of hands on."
S.R. Qinetiq

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Course content

Mobile network history

The evolution of the mobile network,
Limitations and challenges in current mobile networks,
Requirement in future mobile networks

Software Defined Networking Concepts

The OFN architecture,
NFV,
OPNFV,
Southbound Interface,
The controller,
Northbound interface,
Application layer,
Urbanisation

Fabric, SD-WAN, vCPE, vRAN, vEPC

Fabrics,
NSX and VMware company,
SD-WAN,
vCPE,
vRAN,
vEPC

Open source software for networks

Open source,
Open Compute Project (OCP),
OPNFV,
ONAP (Open Network Automation Protocol),
Open vSwitch,
OpenDaylight platform,
PNDAs,
SNAS

Skin networking

Skin networking architecture,
Virtual access points,
Software LANs,
Participatory internet

New generation protocols

OpenFlow,
VXLAN,
NVGRE,
MEF Ethernet,
Carrier-Grade Ethernet,
TRILL (Transparent Interconnection of Lots of Links),
LISP (Locator/Identifier Separation Protocol)

Mobile cloud networking

Mobile cloud networking,
Mobile cloud,
Mobile control,
Mobility protocols,
Multihoming,
Network level multihoming,
Transport level multihoming

Software defined mobile network security

Evolving threat landscape for mobile networks,
Traditional security in mobile networks,
Principles of adequate security in mobile networks,
Typical security architecture for mobile networks,
Enhanced security for SDMN,
SDMN security applications

