Welcome to Telco Cloud Part 4: Kubernetes

NWV_144d | On-Demand | 5G Core | Express
Course Duration: 1 hour

Telecom operators are on the cusp of a multitude of network and business transformation choices. This course (part of multi-part series) provides a high-level view of the Kubernetes container orchestration framework. This course describes Network Functions (NFs) and services deployment, operations, and maintenance. The role of container runtime and Kubernetes for container management in telco clouds are described. The training steps through the network function packaging, deployment, and operations using Kubernetes (K8s) in telecom networks. In addition, the course discusses how Kubernetes can enhance service availability, resiliency, and performance assurance.

Intended Audience

This course is designed for a broad audience of personnel working in the telecom industry.

Objectives

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

- Describe the need for container management in telco clouds
- Identify the role of Kubernetes orchestration in telco clouds
- Sketch the Kubernetes framework
- Describe the networking and storage options in Kubernetes
- Explain service availability scalability, and resiliency in K8s
- Describe NF performance assurances using K8s
- Explain the role of helm as Kubernetes package manager
- Identify open-source tools for maintenance and operations

Course Prerequisites

Welcome to Telco Cloud Part 3: Container Deployment

Outline

1. Kubernetes: What and Why?
1.1 What is Kubernetes and Why
1.2 Kubernetes key features
1.3 Kubernetes in Telco NFV clouds

2. Kubernetes Framework
2.1 What is a Kubernetes cluster?
2.2 Container runtime options for Kubernetes
2.3 Networking and storage in Kubernetes

3. Kubernetes in Telco Cloud
3.1 Network function deployment
3.2 Service availability, scalability and resiliency
3.3 Packaging Telco network functions
3.4 K8s add-on tools for NF operations

Putting it all together

Final assessment

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