CNF and Kubernetes Orchestration Essentials

NWV_210x | Expert-Led Live | 5G Core | Expert
Course Duration: 1 day

Networks such as 5G have been designed to better support containerization. Containerized Network Functions, CNFs, allow for higher capacity, but they have a number of challenges around networking, performance, isolation, and orchestration. The course provides a high-level introduction to deploying a containerized network in terms of the architecture, requirements, challenges, operations, and management. The course also discusses highlights of deployment, orchestration and operations considerations of cloud native functions, and microservices.

Intended Audience

This course is intended for personnel who are looking for a high-level introduction to Containers, Kubernetes and Docker-based cloud environments.

Objectives

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

- Identify applications of containerized network and/or cloud native functions (i.e., 5G)
- Discuss CNF deployment options
- Identify key service deployment considerations
- Summarize the role of containerization in networks (i.e., 5G)
- Explain networking performance enhancement for containers
- List main Docker and Kubernetes components and functions
- Discuss the role of Docker and Kubernetes in enabling NFs CNFs
- List and describe containerized NF lifecycle management

Course Prerequisites

Welcome to Telco Cloud Part 1: Virtualization and Orchestration

Outline

1. Containers and Kubernetes In a Nutshell
1.1 Need for cloud native network functions
1.2 Microservices and Containers
1.3 Role of Docker and Kubernetes orchestration

2. Virtualized Infrastructure
2.1 Network functions cloud deployment options
2.2 Docker components
2.3 Kubernetes orchestration
2.4 CNF deployment considerations

3. Network Functions Virtualization
3.1 Service-Based Architecture
3.2 Network functions as microservices considerations

4. Service Deployment Considerations
4.1 Container performance considerations
4.2 Container I/O performance enhancements
4.3 Lifecycle management

© 2024 Award Solutions, Inc.