

# Cisco ACI & Kubernetes Networking

Course code: DC-ACIK8S

The major trend in a datacenter networking is currently centrally managed network, fulfilling all the requirements of modern applications - from a huge data throughput, simple scalability, enhanced security for any attached endpoint and their microsegmentation, to automation of deployed network policies across all datacenters. Such a solution is represented by Cisco Application Centric Infrastructure (ACI), which is capable of managing not only the physical part of network, but also the virtual world of Kubernetes, in a form of mutual integration using ACI CNI plugin. Goal of this course is to describe main Kubernetes architecture for network-oriented IT engineers and a practically explain the advantage of its integration with Cisco ACI - securing the containerized workloads, detailed network visibility of individual containers (K8S PODs), or exposing a deployed application to the external users, while ACI itself can act as a hardware loadbalancer for them. This course contains one extensive practical lab, where each participant will have opportunity to deploy simple Kubernetes cluster, integrate it with ACI and ensure the connectivity and secure segmentation for multi-tier demo application.

## What we teach you

- Cisco ACI Overview
- Kubernetes Architecture Overview
- Kubernetes Networking:
- ACI & Kubernetes Integration
- Deployment of Kubernetes Demo Application

## Required skills

- Knowledge of basic Datacenter operation concepts
- Good knowledge of TCP/IP stack protocols
- Understanding of basic network troubleshooting
- Basic experience with Linux OS administration
- Knowledge of Cisco ACI solution & configuration

## Teaching materials

All participants will receive printed presentation and LAB guide.

## Technical equipment

Nexus 9300 switches in ACI mode, APIC, VMware, CentOS Stream 8.

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