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# VMware Telco Cloud Automation: Install, Configure, Manage

## Course Overview

This five-day, hands-on training course provides you with the advanced knowledge, skills, and tools to achieve competency in operating and troubleshooting the VMware Telco Cloud Automation environment. In this course, you are introduced to VMware Telco Cloud Automation infrastructure settings, deployment options and procedures. You will explore containers as a service and understand the workflow details of partner integration processes. You will learn about infrastructure automation and its importance in VMware Telco Cloud Automation. You will onboard and instantiate network functions and network services using hands-on lab exercises.

In addition, this course teaches life cycle management workflows as well as several types of technical problems in VMware Telco Cloud Automation, which you will identify, analyze, and solve through a systematic process.

## Course Objectives

By the end of the course, you should be able to meet the following objectives:

- List VMware Telco Cloud Automation deployment options and procedures
- Define Infrastructure Automation and describe infrastructure deployment
- Describe the VMware Telco Cloud Automation infrastructure settings
- Configure containers as a service functionality
- Describe partner integration options and procedures
- Instantiate network services and network functions
- Describe the authorization model of VMware Telco Cloud Automation
- Define platform life cycle management (LCM) for VMware Telco Cloud Automation
- Enumerate troubleshooting concepts and day two operations for VMware Telco Cloud Automation
- Describe the use of APIs within VMware Telco Cloud Automation
- List examples of how VMware Telco Cloud Automation can be used in a CICD environment

## Target Audience

- Telco cloud system administrators and telco network operations engineers
- Professionals who work with telco or enterprise and data center networks
- Designers and operations engineers who manage telco workloads

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## Prerequisites

Before taking this course, you should have completed the VMware Telco Cloud Automation Fundamentals course.

You should also have the following understanding or knowledge:

- Good understanding of VMware products like VMware vSphere®, VMware NSX®, VMware vSAN™, TKG, and VMware vCloud Director®
- Knowledge and working experience of network functions virtualization, including:
    - ETSI NFV framework, virtualized network functions, and related Interfaces
    - Kubernetes, Helm, cloud-native network functions, and CNI

## Course Delivery Options

- Classroom
- Live Online
- Private Training
- On Demand

## Product Alignment

- Telco Cloud Automation 2.2

## Course Modules

1   **Course Introduction**
   - Introductions and course logistics
   - Course objectives

2   **VMware Telco Cloud Automation Installation**
   - Describe day zero operations for VMware Telco Cloud Automation
   - Describe the VMware Telco Cloud Automation architecture
   - List the steps to perform VMware Telco Cloud Automation deployment
   - List the steps to perform VMware Telco Cloud Automation control plane integration
   - Describe VMware Telco Cloud Automation control plane scaling
   - Describe the requirements for other applications such as vRealize Orchestrator and Harbor
   - Describe where, when, and how to use VMware Telco Cloud Automation tagging

3   **Day 1 Operations: Infrastructure Automation**
   - Describe infrastructure automation
   - List the use cases of infrastructure automation
   - List the benefits of infrastructure automation
   - Describe the infrastructure requirements of infrastructure automation
   - Describe the infrastructure automation domains
   - List the steps to deploy an infrastructure using infrastructure automation

4   **Day 1 Operations: Infrastructure Settings**
   - Describe the VMware Telco Cloud Automation infrastructure options
   - Describe VMware Telco Cloud Automation infrastructure requirements
   - Outline the role of virtual infrastructure and VMware Telco Cloud Automation
   - Identify the benefits of public and private infrastructures
   - List the steps to integrate a VM-based virtual infrastructure
   - List the steps to integrate a container-based virtual infrastructure
   - Describe private infrastructure requirements

5   **Day 1 Operations: Containers as a Service**
   - Define containers as a service (CaaS)
   - List the challenges of CNF deployment without automation
   - Describe the Kubernetes and Tanzu Kubernetes Grid architectures
   - List steps to create a Kubernetes cluster template
   - Describe the process for deploying node pools and groups
   - List the steps to support anti-affinity of workload cluster nodes
   - Describe cluster monitoring
   - List CaaS scale options

6   **Day 1 Operations: Partner Integration**
   - Describe partner integration and the types of partners
   - Describe Harbor and the various Harbor platforms
   - List the steps to interface with a Harbor platform
   - Compare and contrast specialized VNF managers (S-VNFMs) and generic VNF managers (G-VNFMs)
   - Explain how to add an S-VNFM
   - Define S-VNFM use cases
   - List the benefits and challenges of using Airgap

7   **Day 1 Operations: Network Functions ad Network Services**
   - Describe the roles of network services and network functions
   - List the types of descriptors
   - Describe the role of TOSCA
   - Describe the role of onboarding
   - List the steps to onboard network functions and network services
   - Examine the results of the onboarding process
   - List the steps to instantiate network functions and network services
   - Examine the results of the instantiation process

8   **Day 2 Operations: Authorization Model**
   - Explain the resources that can be accessed in vSphere

- Define the role of a vCenter Server system in credential management
- Define the role of Keycloak in credential management
- Describe the procedures to create, delete, and modify rules using vCenter Server
- Explain how to control and verify access to vSphere resources
- List the roles in VMware Telco Cloud Automation
- Explain the tasks and list the levels of permissions needed in VMware Telco Cloud Automation
- List all the permissions and filters that can be implemented in VMware Telco Cloud Automation

## 9 Day 2 Operations: Life Cycle Management

- Explain the life cycle stages in VMware Telco Cloud Automation control plane
- Explain the life cycle stages in VMware Telco Cloud Automation
- Define an upgrade schedule
- Apply an upgrade schedule for life cycle management of the VMware Telco Cloud Automation control plane
- Apply an upgrade schedule for life cycle management in VMware Telco Cloud Automation
- Describe network function and network service life cycle management events
- Execute network function and network service healing
- Perform network function and network service termination

## 10 Day 2 Operations: Troubleshooting

- List the components of the VMware Telco Cloud Automation dashboard
- Explain the features of fault management in VMware Telco Cloud Automation
- Explain the features of performance management in VMware Telco Cloud Automation
- Describe the use of fault management of VMware Telco Cloud Automation for VNFs and CNFs
- Describe the use of performance management of VMware Telco Cloud Automation for VNFs and CNFs

- Describe the use of CCLI for troubleshooting
- Define the procedures to integrate vRealize Operations Manager with VMware Telco Cloud Automation
- Describe how to use vRealize Operations

## 11 Day Two Operations: API Management

- Define the VMware Telco Cloud Automation API
- Explain the API architecture
- Describe VMware Telco Cloud Automation API use cases
- Describe how to request security tokens for implementation
- Explain how to implement commands through external systems using APIs

## 12 Day Two Operations: Continuous Integration and Continuous Delivery

- Describe continuous integration and continuous delivery (CICD)
- List the benefits and challenges of CICD
- Describe how VMware Telco Cloud Automation can be used in a CICD environment
- Explore VMware Telco Cloud Automation CICD examples

## Contact

If you have questions or need help registering for this course, click here.