

## VMware Telco Cloud Platform for Radio Access Network: Install, Configure, Manage [V1.5]

### 1 Course Introduction

- Introduction and course logistics
- Course objectives

### 2 Day 0 Operations: VMware Telco Cloud Platform-RAN Overview and Installation

- Describe day 0, day 1, and day 2 operations
- Describe day 0 operations for VMware Telco Cloud Automation
- List the day 0 requirements for Telco Cloud Automation functionality
- Describe the VMware Telco Cloud Automation architecture
- Describe the VMware Telco Cloud Automation control plane architecture
- List the VMware Telco Cloud Automation deployment options
- List the steps to perform VMware Telco Cloud Automation deployment
- List the steps to perform VMware Telco Cloud Automation control plane integration with vSphere
- Describe VMware Telco Cloud Automation control plane scaling
- Describe the vSphere Architecture
- List the key VMware components that are part of vSphere
- Describe the key use cases for vSphere

### 3 Day 1 Operations: Infrastructure Automation

- Describe infrastructure automation
- List the use cases of infrastructure automation
- Describe the requirements of infrastructure automation
- Describe provisioning with and without infrastructure automation
- List the benefits of infrastructure automation
- List challenges of infrastructure automation
- Describe the infrastructure requirements of infrastructure automation
- Describe the infrastructure automation domains
- Describe the process to identify the infrastructure automation domains

- Configure an infrastructure for infrastructure automation
- List the steps to deploy an infrastructure using infrastructure automation
- List the steps to validate infrastructure deployment

#### 4 Day 1 Operations: Containers as a Service

- Describe the role of containers in VMware Telco Cloud Platform-RAN
- Describe the benefits and challenges of containers
- List the container use cases
- Describe the Kubernetes architecture
- List the roles of nodes and clusters
- Describe the supporting components of Kubernetes
- Compare Kubernetes to Tanzu Kubernetes Grid
- List the key features of Tanzu Kubernetes Grid
- Describe the architecture of Tanzu Kubernetes Grid
- List the steps to create a Kubernetes cluster template
- Describe the process for deploying node pools and groups
- List the steps to instantiate a cluster
- List CaaS scale options
- List upgrade operations
- Describe how advanced features like Air Gap are supported

#### 5 Day 1 Operations: Network Functions and Network Services

- Describe the role of a network service
- Describe the types of network functions
- List the type of descriptors
- Describe the requirements of a descriptor
- Describe the role of TOSCA
- Describe how TOSCA is used to create descriptors
- Explore the basics of the TOSCA structure
- Examine the types of descriptors

- Describe the role of onboarding
- List the steps to onboard a virtual network function
- List the steps to onboard a cloud-native network function
- Examine the results of the onboarding process
- Describe the role of Harbor
- Explain how to list the contents of a Harbor platform
- List the steps to interface with a Harbor platform
- List the steps to instantiate a virtual network function
- List the steps to instantiate a cloud-native network function
- Examine the results of the instantiation process
- List the steps to instantiate a network service
- Examine the results of the instantiation process

#### 6 Day 2 Operations: Platform 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
- Define workflows
- Describe how upgrade schedules are used to manage life cycle events for the VMware Telco Cloud Automation control plane
- Describe how upgrade schedules are used to manage life cycle events for VMware Telco Cloud Automation
- Describe network function life cycle management events
- Execute healing
- Perform a termination
- Execute workflows
- Perform an upgrade
- Describe network service life cycle management events
- Execute network service healing
- Set up network service monitoring

- Perform a network service termination

#### 7 Day 2 Operations: Troubleshooting

- Identify the features of the VMware Telco Cloud Platform for RAN dashboards
- List the components of the VMware Telco Cloud Platform for RAN dashboards
- Explain the features of fault management in VMware Telco Cloud Platform
- Describe the use of fault management in VMware Telco Cloud Platform for network functions
- Describe the use of performance management in VMware Telco Cloud Platform for network functions
- Describe the use of logs in VMware Telco Cloud Platform
- Troubleshoot using VMware Telco Cloud Platform logs
- List the key CLI tools that can be used for troubleshooting
- List the steps to identify common network function deployment problems
- Examine key troubleshooting scenarios

#### 8 Day 2 Operations: API Management

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