vmware® LEARNING

VMware Tanzu Kubernetes Grid: Install, Configure, Manage

Course Overview

During this three-day course, you focus on installing VMware Tanzu™ Kubernetes Grid™ on a VMware vSphere® environment and then provisioning and managing Tanzu Kubernetes clusters. The concepts learned in this course should be transferable for users who need to install Tanzu Kubernetes Grid on other supported clouds.

Course Objectives

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

- Describe Tanzu Kubernetes Grid
- Differentiate between the Kubernetes life cycle management options in the VMware Tanzu portfolio
- Explain how to prepare a vSphere environment to install Tanzu Kubernetes Grid
- Describe how to initialize a Tanzu Kubernetes Grid instance
- Detail how to create Tanzu Kubernetes clusters
- Explain how to deploy the Tanzu Kubernetes Grid extensions on a Tanzu Kubernetes cluster
- Describe how to troubleshoot a Tanzu Kubernetes Grid instance

Target Audience

Platform operators who are responsible for deploying and managing Tanzu Kubernetes clusters.

Prerequisites

- Understanding of Kubernetes and the Kubernetes cluster architecture
- Experience working with the Kubernetes API

Course Delivery Options

- Classroom
- Live Online
- Private Training

vmware®

Course Modules

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

2 **Introducing VMware Tanzu Kubernetes Grid**
- Describe the VMware Tanzu products responsible for Kubernetes life cycle management
- Describe the Tanzu Kubernetes Grid concepts
- Describe the components of a Tanzu Kubernetes Grid instance
- Describe the Tanzu CLI
- List the requirements for a bootstrap machine
- Describe the Carvel Tool Set
- Describe Cluster API
- List the infrastructure providers
- Detail the Cluster API controllers
- List the Cluster API Custom Resource Definitions

3 **Management Cluster**
- Describe the vSphere requirements for deploying a management cluster
- List the differences between deploying on vSphere 6.7 Update 3 and vSphere 7
- Describe the NSX Advanced Load Balancer components
- Explain how Tanzu Kubernetes Grid integrates with NSX Advanced Load Balancer
- Describe how Kubernetes manages authentication
- Explain what Pinniped is
- Explain what Dex is
- Describe the Pinniped authentication workflow
- List the steps to install a Tanzu Kubernetes Grid management cluster
- Describe what happens when a management cluster is created
- Describe the commands available for working with management clusters

4 **Tanzu Kubernetes Clusters**
- Describe the steps to build a custom image
- Describe the available customizations
- Describe the options for deploying Tanzu Kubernetes clusters
- Describe how Tanzu Kubernetes clusters are created
- Describe the commands available for working with Tanzu Kubernetes clusters
- Describe the VMs that make up a Tanzu Kubernetes cluster
- Describe the pods that run on a Tanzu Kubernetes cluster
- Describe the Tanzu Kubernetes Grid core add-ons that are installed on a cluster

5 **Configuring and Managing Tanzu Kubernetes Grid Instances**
- Describe the Tanzu Kubernetes Grid extensions
- Describe the Harbor Image Registry
- Describe Fluent Bit
- Detail the logs that Fluent Bit collects
- Describe basic Fluent Bit configuration
- Describe the Contour ingress controller
- Explain how to install Contour on a Tanzu Kubernetes cluster
- Describe Service Discovery
- Describe External DNS
- Detail the configuration options for BIND servers
- Describe Prometheus
- Describe Grafana

6 **Troubleshooting Tanzu Kubernetes Grid**
- Describe the various Tanzu Kubernetes Grid logs
- Identify the location of Tanzu Kubernetes Grid logs
- Describe the purpose of Crash Diagnostics
- Describe how to use SSH to connect to a Tanzu Kubernetes VM
- Detail the steps to troubleshoot a failed cluster deployment

Contact

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