

# Professional VMware Application Modernization

## Exam Details (Last Updated: 06/07/2021)

The Associate VMware Application Modernization (2V0-71.21) exam, which leads to VMware Certified Professional – Application Modernization 2021 certification is a 55-item exam, with a passing score of 300 using a scaled method. Candidates are given 130 minutes to complete the exam, which includes adequate time to complete the exam for non-native English speakers.

## Exam Delivery

This is a proctored exam delivered through Pearson VUE. For more information, visit the [Pearson VUE website](#).

## Certification Information

For details and a complete list of requirements and recommendations for attainment, please reference the [VMware Education Services – Certification website](#).

## Minimally Qualified Candidate

The minimally qualified candidate (MQC) is recommended to have at least 6 to 12 months of experience. The MQC can understand and describe standard features and capabilities of VMware Tanzu Standard Edition components including VMware vSphere with Tanzu, VMware Tanzu Kubernetes Grid, and VMware Tanzu Mission Control. The MQC can explain the VMware Tanzu vision and has hands-on experience with containerization, Kubernetes, and Application Modernization concepts. The MQC can perform common operational and administrative tasks in an environment where Tanzu Standard Edition Components are present, including basic troubleshooting and repairing of TKG clusters. The MQC can identify the primary components and features of Tanzu Mission Control but not limited to cluster lifecycle management, Role Based Access Controls, security policies, cluster inspections and data protection. In addition, the MQC can understand and describe the steps for installation and setup of Tanzu Standard Edition Components.

The MQC works in environments where VMware Tanzu Kubernetes Grid, vSphere with Tanzu and Tanzu Mission Control are used in production. The MQC can perform troubleshooting and repairing of TKG and TKC clusters. The MQC can identify the primary components and features of Tanzu Mission Control but not limited to cluster lifecycle management, Role Based Access Controls, security policies, cluster inspections and data protection. The MQC can perform day-2 operations related to TKG and TKC clusters. A successful candidate has a good grasp of the topics included in the exam blueprint.

## Exam Sections

VMware exam blueprint sections are now standardized to the seven sections below, some of which may NOT be included in the final exam blueprint depending on the exam objectives.

- Section 1 – Architecture and Technologies
- Section 2 – Products and Solutions
- Section 3 – Planning and Designing
- Section 4 – Installing, Configuring, and Setup
- Section 5 – Performance-tuning, Optimization, and Upgrades

Section 6 – Troubleshooting and Repairing

Section 7 – Administrative and Operational Tasks

If a section does not have testable objectives in this version of the exam, it will be noted below, accordingly. The objective numbering may be referenced in your score report at the end of your testing event for further preparation should a retake of the exam be necessary.

### Sections Included in this Exam

Section 1 – Architecture and Technologies

Objective 1.1 Describe Kubernetes Lifecycle Management Concepts

Objective 1.2 Describe Application Modernization Concepts

Objective 1.3 Describe Kubernetes logical objects

Objective 1.4 Describe Kubernetes Platform and Service Administration Concepts

Objective 1.5 Describe Kubernetes Cluster and Application Security Concepts

Objective 1.6 Describe Kubernetes Application Deployment and Lifecycle Management Concepts

Objective 1.7 Describe Kubernetes networking and storage concepts

Section 2 – Products and Solutions

Objective 2.1 Understand and Explain Common Administration Requirements for Tanzu Kubernetes Grid

Objective 2.2 Understand and Explain Common Administration Requirements for vSphere with Tanzu

Objective 2.3 Understand and Explain Common Administration Requirements for Tanzu Mission Control

Section 3 – There are no testable objectives for this section

Section 4 – Installing, Configuring, and Setup

Objective 4.1 Know the Tanzu Kubernetes Portfolio

4.1.1 Tanzu Kubernetes solution that should be used

4.1.2 Tanzu Services that should be used

4.1.3 Recommended design of TKGm

4.1.4 Configuration for the recommended design and image management

Objective 4.2 Describe Tanzu Kubernetes Grid

4.2.1 A bootstrap environment and its requirements

4.2.2 Tanzu Kubernetes clusterPlans

4.2.3 TKG management cluster(s)

4.2.4 TKG workload clusters

4.2.5 Supervisor cluster Services and Capabilities

4.2.6 Shared and In-cluster Services

4.2.7 Tanzu Kubernetes Grid Instance

4.2.8 Tanzu Kubernetes Grid Installer

4.2.9 Cluster access and authentication mechanism

Objective 4.3 Deploy application to a cluster

- 4.3.1 Situation that would require a secret
- 4.3.2 Situation that would require a config map
- 4.3.3 Logging on Kubernetes
- 4.3.4 Metrics configuration for an application
- 4.3.5 Health check probes for an application
- 4.3.6 Expose an application to outside users
- 4.3.7 Recommended ways to expose an application
- 4.3.8 Examples of troubleshooting steps to identify errors
- 4.3.9 Influence scheduling in a cluster

Objective 4.4 Understand Tanzu Kubernetes Cluster Security

- 4.4.1 Harbor Registry Security Policies
- 4.4.2 Implement RBAC capabilities
- 4.4.3 Audit capabilities
- 4.4.4 Methods to implement pod security
- 4.4.5 Admission control options to implement on a cluster

Objective 4.5 Deploy Tanzu Kubernetes Grid

- 4.5.1 Prerequisites for TKG installer
- 4.5.2 Prerequisites required to configure the vSphere environment for TKG
- 4.5.3 Steps required to create a management cluster
- 4.5.4 Configure the Tanzu Kubernetes Clusters
- 4.5.5 Steps required to deploy and manage Tanzu Kubernetes Grid Instances
- 4.5.6 Configure the ingress control
- 4.5.7 Different IaaS options supported by TKG

Section 5 – There are no testable objectives for this section

Section 6 – Troubleshooting and Repairing

- Objective 6.1 Observe overall cluster health
- Objective 6.2 Observe component health
- Objective 6.3 Review cluster inspections
- Objective 6.4 Review deployment logs

Section 7 – Administrative and Operational Tasks

- Objective 7.1 Describe Administrative and Operational Tasks for Tanzu Mission Control
  - 7.1.1 Common administrative and operational Tasks
  - 7.1.2 Configure Tanzu Mission Control service roles
  - 7.1.3 Backup / restore a cluster using TMC

- 7.1.4 Cluster compliance scanning
- 7.1.5 TMC Security
- 7.1.6 Policy model
- 7.1.7 Steps to provision a cluster
- 7.1.8 Describe clusters are scaled and upgraded
- 7.1.9 Network policies
- 7.1.10 Describe the agent resources installed
- 7.1.11 Steps for attaching a cluster to VMware Tanzu Mission Control
- 7.1.13 Describe cluster inspections
- 7.1.14 Image registry policies
- Objective 7.2 Describe Administrative and Operational Tasks for Tanzu Kubernetes Grid
  - 7.2.1 Tanzu Workload clusters in TKG
  - 7.2.2 Cluster configuration & health
  - 7.2.3 Upgrade Tanzu Workload clusters in TKG
  - 7.2.4 Harbor Configuration for Common Container Registry Scenarios
  - 7.2.5 Requirements for leveraging shared services
  - 7.2.6 RBAC and access methods for Tanzu Kubernetes Clusters
- Objective 7.3 Describe Administrative and Operational Tasks for Tanzu Kubernetes Grid
  - 7.3.1 Deploy Tanzu Kubernetes Clusters with TKG Service
  - 7.3.2 Requirements for deploying workload management
  - 7.3.3 vSphere Client pages for viewing Supervisor Cluster Configuration & Health
  - 7.3.4 vSphere Client pages for viewing TKG Service and Tanzu Kubernetes Cluster Health
  - 7.3.5 Content libraries for Tanzu Kubernetes Grid Service (for vSphere).
  - 7.3.6 Upgrade Tanzu Kubernetes Clusters
  - 7.3.7 Harbor Configuration for Common Container Registry Scenarios
  - 7.3.8 Requirements for leveraging shared services
  - 7.3.9 RBAC and access methods for Tanzu Kubernetes Clusters
  - 7.3.10 Resource management techniques
  - 7.3.11 vSphere namespace management

### [Recommended Courses/Training Materials](#)

[VMware vSphere with Tanzu: Deploy and Manage \[V7\]](#)

[VMware Tanzu Kubernetes Grid: Install, Configure, Manage \[V1.0\]](#)

[VMware Tanzu Mission Control: Management and Operations 2020](#)

[Kubernetes Foundations](#)

## References\*

In addition to the recommended courses, item writers use the following references for information when writing exam questions. It is recommended that you study the reference content as you prepare to take the exam, in addition to any recommended training.

Name	Products
<a href="http://www.vmware.com">http://www.vmware.com</a>	VMware Tanzu
<a href="http://kb.vmware.com">http://kb.vmware.com</a>	VMware Tanzu
<a href="https://blogs.vmware.com">https://blogs.vmware.com</a>	VMware Tanzu
<a href="https://docs.vmware.com">https://docs.vmware.com</a>	VMware Tanzu
<a href="https://www.vmware.com/support/pubs/">https://www.vmware.com/support/pubs/</a>	VMware Tanzu
<a href="https://www.vmware.com/techpapers.html">https://www.vmware.com/techpapers.html</a>	VMware Tanzu
<a href="http://pubs.vmware.com">http://pubs.vmware.com</a>	VMware Tanzu
*Content in this exam is based on VMware Tanzu Basic edition. Review all Basic edition release notes and material for features and function.	

## Certification Requirements

VCP-AM 2021

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