

# 5V0-71.19

## VMware Cloud Native Master Specialist

### Exam Details

The VMware Cloud Master Specialist (5V0-71.19) exam which leads to Master Specialist – VMware Cloud Native 2021 is a 67-item exam, with a passing score of 300 using a scaled method. Candidates are given an appointment time of 105 minutes, which includes five-minute seating time and adequate time to complete the exam for non-native English speakers. Actual exam time is 100 minutes.

### Exam Delivery

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

### Badge 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 can leverage documentation to configure, operate, secure and deploy applications to a Cloud Native container platform without assistance. Candidates must hold a valid Certified Kubernetes Administrator (CKA) credential by The Linux Foundation and have completed all recommended training courses for this credential. The successful candidate will likely hold additional industry-recognized IT certifications or accreditations. The MQC should have all the knowledge contained in the exam sections listed below.

## Exam Sections

### Section 1 - Application Deployment to a Cluster

- Objective 1.1 Identify the situation that would require a secret.
- Objective 1.2 Identify the situation that would require a config map.
- Objective 1.3 Given a scenario, identify proper logging for the application.
- Objective 1.4 Given a scenario, identify proper metrics for the application.
- Objective 1.5 Given a scenario, identify proper probes for the application.
- Objective 1.6 Given a scenario, identify the proper way to expose an application to outside users.
- Objective 1.7 Given a scenario, identify the proper way to expose a container.
- Objective 1.8 Given a scenario, identify helm best practice.
- Objective 1.9 Given a common complex error, identify appropriate next steps or identify what the error implies.
- Objective 1.10 Given a scenario, identify how to influence scheduling in a cluster.
- Objective 1.11 Given an application architecture scenario, identify the changes that should be made to the application to make it suitable for Cloud Native platforms.
- Objective 1.12 Given a Dockerfile, identify changes that best suit container best practices.

### Section 2 - Cluster Security

- Objective 2.1 Given a scenario, identify proper RBAC to implement.
- Objective 2.2 Given a scenario, identify proper audit capabilities to implement.
- Objective 2.3 Given a scenario, identify the Proper Pod Security Policy to implement.
- Objective 2.4 Given a scenario, identify appropriate admission control options to implement on a cluster.
- Objective 2.5 Given a scenario, identify appropriate open policy agent configuration to implement.
- Objective 2.6 Given a scenario, identify appropriate network policy to implement.

### Section 3 - Cluster Operations

- Objective 3.1 Given a scenario, identify an appropriate option for configuring backup on a cluster.
- Objective 3.2 Given a scenario, identify appropriate options for cluster.
- Objective 3.3 Given a scenario, identify the appropriate options for logging configuration.
- Objective 3.4 Given a scenario, identify an appropriate option for configuring cluster conformance tests.
- Objective 3.5 Given a scenario, identify an appropriate option for configuring an ingress controller to satisfy ingress options on cluster.
- Objective 3.6 Given a scenario, identify the appropriate option for separation of application teams.
- Objective 3.7 Given a scenario, identify why to use one networking plugin over another.
- Objective 3.8 Given a scenario, configure authentication.

## References

<https://www.cncf.io/certification/cka/> - CKA Certification

<https://kubernetes.academy/courses> - KubeAcademy from VMware

<https://kubernetes.io/docs/concepts/configuration/secret/> - [Section 1, Objective 1.1]

<https://kubernetes.io/docs/tasks/configure-pod-container/configure-pod-configmap/> - [Section 1, Objective 1.2]

<https://kubernetes.io/docs/concepts/cluster-administration/logging/> - [Section 1, Objective 1.3]

<https://prometheus.io/docs/> - [Section 1, Objective 1.4]

<https://kubernetes.io/docs/tasks/configure-pod-container/configure-liveness-readiness-startup-probes/> - [Section 1, Objective 1.5]

<https://kubernetes.io/docs/concepts/services-networking/connect-applications-service/> - Ingress / Ingress Controllers / Service of Type LoadBalancer - all available in this section of the [kubernetes.io docs](https://kubernetes.io/docs) - [Section 1, Objective 1.6]

<https://kubernetes.io/docs/concepts/workloads/pods/pod-overview/> - [Section 1, Objective 1.7]

[https://helm.sh/docs/chart\\_best\\_practices/](https://helm.sh/docs/chart_best_practices/) - [Section 1, Objective 1.8]

<https://kubernetes.io/docs/concepts/configuration/manage-compute-resources-container> - [Section 1, Objective 1.10]

<https://kubernetes.io/docs/concepts/configuration/assign-pod-node/> - [Section 1, Objective 1.10]

<https://12factor.net> - [Section 1, Objective 1.11]

<https://cloud.google.com/blog/products/gcp/7-best-practices-for-building-containers> - [Section 1, Objective 1.12]

<https://kubernetes.io/docs/reference/access-authn-authz/rbac/> - [Section 2, Objective 2.1]

<https://kubernetes.io/docs/tasks/debug-application-cluster/audit/> - [Section 2, Objective 2.2]

<https://cloud.google.com/kubernetes-engine/docs/concepts/audit-policy> - [Section 2, Objective 2.2]

<https://octetz.com/posts/setting-up-psps> - [Section 2, Objective 2.3]

<https://kubernetes.io/docs/reference/access-authn-authz/admission-controllers/> - Section 2, Objective 2.4]

<https://www.openpolicyagent.org/docs/latest/> - [Section 2, Objective 2.5]

<https://kubernetes.io/docs/concepts/services-networking/network-policies/> - [Section 2, Objective 2.6]

<https://github.com/heptio/velero> - [Section 3, Objective 3.1]

<https://kubernetes.io/docs/tasks/debug-application-cluster/resource-usage-monitoring/> - [Section 3, Objective 3.2]

<https://kubernetes.io/docs/concepts/cluster-administration/logging/> - [Section 3, Objective 3.3]

<https://sonobuoy.io/> - [Section 3, Objective 3.4]

<https://kubernetes.io/docs/concepts/services-networking/ingress/> - [Section 3, Objective 3.5]

<https://www.youtube.com/watch?v=BSKU6QH0vVE> [Section 3, Objective 3.5]

<https://kubernetes.io/docs/concepts/overview/working-with-objects/namespaces/> - [Section 3, Objective 3.6]

<https://kubernetes.io/docs/concepts/cluster-administration/networking/> - [Section 3, Objective 3.7]

<https://kubernetes.io/docs/reference/access-authn-authz/authentication/> - [Section 3, Objective 3.8]

<https://github.com/dexidp/dex> - [Section 3, Objective 3.8]

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