vmware

5V0-23.20

VMware vSphere with Tanzu Specialist

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Exam 5V0-23.20

VMware vSphere with Tanzu Specialist

Version: 5.0

[Total Questions: 124]

Question No : 1

How can a vSphere administrator replace the Supervisor Cluster API endpoint certificate?

A. Use the certificate-manager CLI utility to replace the Supervisor Cluster API endpoint certificate.
B. Use the vSphere Client to replace the Workload platform MTG certificate.
C. Use the vSphere Client to replace the NSX Load Balancer certificate.
D. Use kubectl to replace the Supervisor Cluster API endpoint certificate.

Answer: B
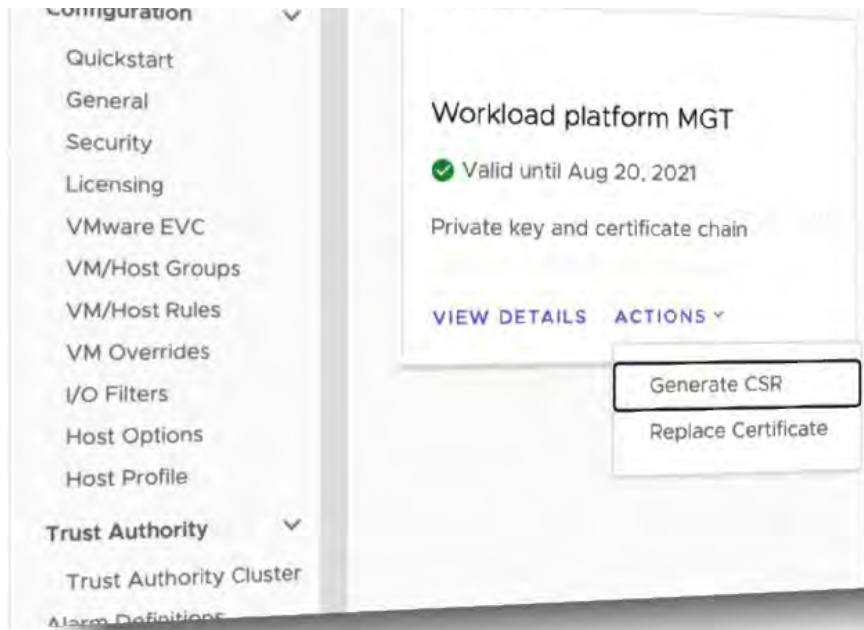
Explanation:

As a vSphere administrator, you can replace the certificate for the virtual IP address (VIP) to securely connect to the Supervisor Cluster API endpoint with a certificate signed by a CA that your hosts already trust. The certificate authenticates the Kubernetes control plane to DevOps engineers, both during login and subsequent interactions with the Supervisor Cluster.

Prerequisites

Verify that you have access to a CA that can sign CSRs. For DevOps engineers, the CA must be installed on their system as a trusted root.

Procedure

☞ In the vSphere Client, navigate to the Supervisor Cluster.
☞ Click Configure then under Namespaces select Certificates.

☞ In the Workload platform MTG pane, select Actions > Generate CSR.

☞ Provide the details for the certificate.

☞ Once the CSR is generated, click Copy.

☞ Sign the certificate with a CA.

☞ From the Workload platform MTG pane, select Actions > Replace Certificate.

☞ Upload the signed certificate file and click Replace Certificate.

☞ Validate the certificate on the IP address of the Kubernetes control plane.

Question No : 2

An administrator working in a vSphere with Tanzu environment wants to ensure that all persistent volumes configured by developers within a namespace are placed on a defined subset of datastores The administrator has applied tags to the required datastores in the vSphere Client

Which action should the administrator take next to meet the requirement?

A. Create a storage policy containing the tagged datastores. and apply it to the vSphere Namespace.

B. Create a storage class containing the tagged datastores. and apply it to the Supervisor Cluster

C. Create a persistent volume claim containing the tagged datastores, and apply it to the vSphere Namespace.

D. Create a storage Policy containing the tagged datastores. and apply it to the Supervisor Cluster.

Answer: A
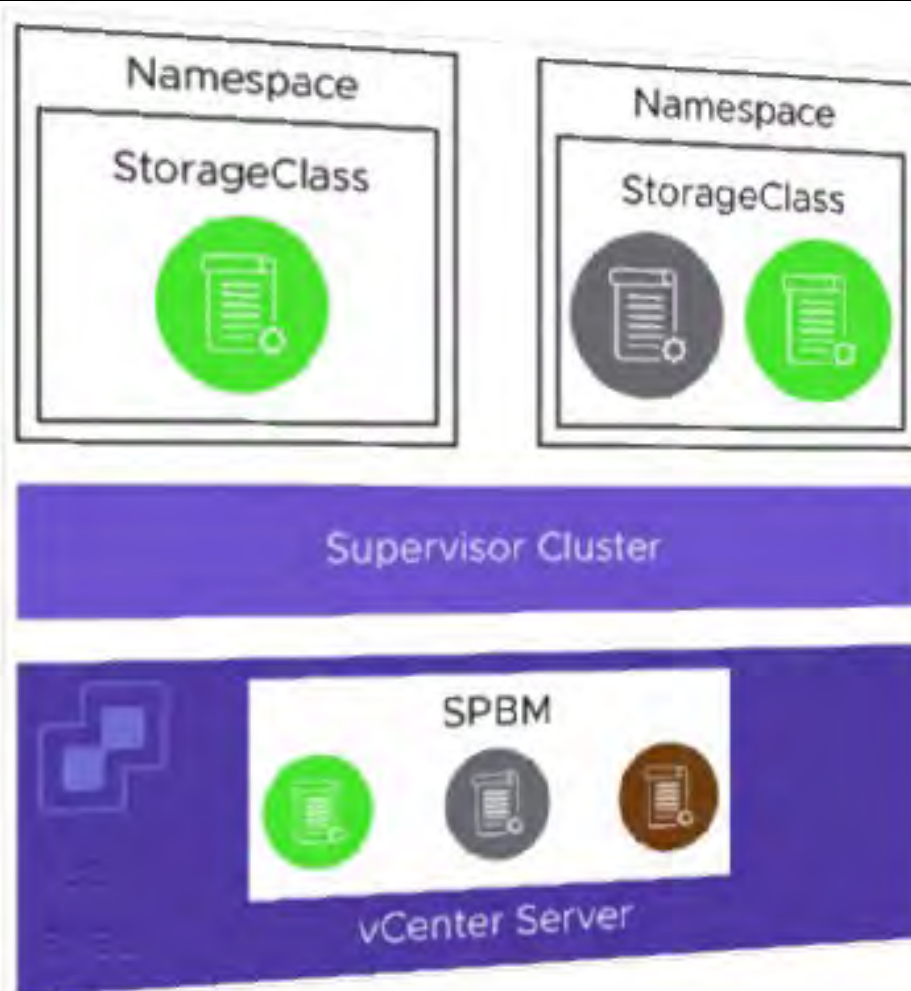
Explanation:
Graphical user interface

Description automatically generated

The vSphere administrator defines and assigns VM storage policies to a namespace:

• VM storage policies are translated into Kubernetes storage classes.

• Developers can access all assigned VM storage policies in the form of storage classes.

• Developers cannot manage storage classes.

Storage class names are created in the following way:

• Spaces in VM Storage Policy names are replaced with hyphens (-).

• Special characters are replaced with a digit. A VM Storage Policy called My Gold Policy
$ is called my-gold-policy-0 as a storage class.

Question No : 3

Which statement accurately describes the upgrade of a vSphere with Tanzu Supervisor

Cluster?

A. vCenter Server performs an in-place upgrade of the Supervisor Cluster control plane VMs.
B. vCenter Server orchestrates the rolling upgrade of Supervisory control plane VMs and upgrades the ESXi host spherelet component.
C. An administrator manually deploys new Supervisor Cluster control plane VMs and uses vSphere Lifecycle Manager to update the ESXi host spherelet component.
D. An administrator downloads and installs new RPMs to the Supervisor Cluster control plane VMs.

Answer: C

Question No : 4

How does Kubernetes implement the vSphere storage policy in vSphere with Tanzu?

A. Storage class
B. Paravirtual CSI
C. Static Persistent Volume
D. Persistent Volume

Answer: A

Explanation: When vSphere with Tanzu converts storage policies that you assign to namespaces into Kubernetes storage classes, it changes all upper case letters into lower case and replaces spaces with dashes (-). To avoid confusion, use lower case and no spaces in the VM storage policy names.

Storage Policy Based Management is a vCenter Server service that supports provisioning of persistent volumes and their backing virtual disks according to storage requirements described in a storage policy.

Question No : 5

To which set of networks are the Supervisor Cluster nodes attached when deploying with an NSX-T network topology?

A. Frontend and Workload
B. Frontend and Management
C. Workload and Management
D. Management and NSX Overlay

Answer: C

Explanation: The Network Service has been extended to support the vSphere Distributed Switch (vDS). Start by configuring the switch with appropriate portgroups. Management will carry traffic between vCenter and the Kubernetes Control Plane (Supervisor Cluster control plane). As we will see in a moment, not having the built in Load Balancing capability of NSX means you will need to deploy your own load balancer externally from the cluster. We will give you a choice of integrated load balancers. The first one we support is HAProxy.

The Management network will also carry traffic between the supervisor cluster nodes and HAProxy. The Frontend network will carry traffic to the Load Balancer virtual interfaces. It must be routable from any device that will be a client for your cluster. Developers will use this to issue kubectl commands to the Supervisor cluster or their TKG clusters. You can have one or more Workload networks.

The primary Workload network will connect the cluster interfaces of the Supervisor cluster. Namespaces can be defined with their own Workload network allowing for isolation between development teams assigned different Namespaces. The Namespace assigned Workload Networks will connect the TKG cluster nodes in that Namespace.

Question No : 6

What is the correct process to store images in a project on the Registry Service?

A. Use the kubect1 push command
B. Use the docker push command
C. Use the vSphere Client to upload the image the content library
D. Use the vSphere Client to upload the image to the Registry Service

Answer: B

Explanation: https://docs.docker.com/docker-hub/repos/

Command	Description
docker image history	Show the history of an image
docker image import	Import the contents from a tarball to create a filesystem image
docker image inspect	Display detailed information on one or more images
docker image ls	List images
docker image prune	Remove unused images
docker image pull	Pull an image or a repository from a registry
docker image push	Push an image or a repository to a registry
docker image rm	Remove one or more images
docker image save	Save one or more images to a tar archive (streamed to STDOUT by default)
docker image tag	Create a tag TARGET_IMAGE that refers to SOURCE_IMAGE

Graphical user interface, text, application

Description automatically generated

• Registry Service: Developers can store and manage Docker and OCI images using Harbor. Harbor is an open-source container image registry that secures images with role-based access control.

Procedure
☞ Login to Harbor Registry with the vSphere Docker Credential Helper.
Note: While providing --user username is acceptable for login, you should use the UserPrincipalName (UPN) syntax (--user username@domain.com) to login and use docker push commands.
☞ Tag the image that you want to push to the project in Harbor Registry with same name as the namespace, where you want to use it:
For example:
☞ uk.co.certification.simulator.questionpool.PList@d8e88b0
☞ To push an image to a project in Harbor, run the following command:Syntax:
For example:
☞ uk.co.certification.simulator.questionpool.PList@d8e8960
Expected result.
☞ uk.co.certification.simulator.questionpool.PList@d8e89b0

Question No : 7

A user needs to identify the namespaces that may be accessed.

Which command will provide the desired output?

A. kubect1 get storageclasses

B. kubect1 config use-context
C. kubect1 config get-contexts
D. kubect1 get contexts

Answer: C

Explanation: A user can have permissions on multiple namespaces. The kubectl commands are typically actioned against the current active namespace.

View the list of available namespaces:

kubectl config get-contexts

Change the current active namespace:

kubectl config use-context <namespace>

Question No : 8

Which element defines the type of storage backing the Persistent Volume?

A. Datastore Cluster
B. Storage Class
C. vVols
D. Persistent Volume Claim

Answer: B

Question No : 9

An organization is preparing to deploy vSphere with Tanzu and will be using the vSphere Networking stack.

How should the administrator allocate management network IP addresses for the Kubernetes Control Plane within the Supervisor Cluster?

A. Five IP addresses are required, one for each of the Control Plane VMs. one for the floating IP address of the Control Plane VM, and one spare for performing rolling cluster upgrades
B. Four IP addresses are required, one for each of the Control Plane VMs and one spare for performing rolling cluster upgrades
C. Three IP addresses are required, one for each of the Control Plane VMs
D. Six IP addresses are required, one for each of the Control Plane VMs, one for the floating IP address of the Control Plane VM. one for performing rolling cluster upgrades

and one for the image Registry VM.

Answer: A

Explanation: Static IPs for Kubernetes control plane VMs

Block of 5A block of 5 consecutive static IP addresses to be assigned to the Kubernetes control plane VMs in the Supervisor Cluster.

Question No : 10

What is the minimum number of portgroups needed, in addition to the management portgroup. to provide connectivity for external services on a Supervisor Cluster?

A. 1
B. 4
C. 3
D. 2

Answer: A

Question No : 11

At which three levels of the vSphere Client is information about Kubernetes Persistent Volumes found? (Choose three.)

A. Resource Pool
B. Cluster
C. vCenter
D. Datastore
E. Virtual Machine
F. Network

Answer: B,C,D

Question No : 12

Which is a valid version change for a Tanzu Kubernetes cluster running Kubernetes version 1.16.7?

A. Upgrade one major version (e.g.. 2.0.1)
B. Upgrade two minor versions (e.g., 1.18.0)
C. Downgrade one patch version (e.g.. 1.16.5)
D. Upgrade one minor version (e.g.. 1.17.0)

Answer: D

Explanation: Be aware of the following constraints when upgrading your cluster.
- ✑ You can upgrade a cluster up to one minor version of Kubernetes from its current version. If necessary, you can perform subsequent upgrades to move the version forward.
- ✑ Upgrading your version of Kubernetes is a one-way operation. You cannot subsequently downgrade the Kubernetes version, or undo an upgrade.

Question No : 13

The virtualization team supports many development teams on a Supervisor cluster. For a specific development team, they would like to limit persistent volumes that can be created on Tanzu Kubernetes clusters to only an NFS based storage array.

Which action should be taken to accomplish this goal?

A. Use kubectl to create a storage class in the Supervisor cluster.
B. Set a resource quota limiting the number of PVCs for that development team.
C. Add a storage policy to that development team's Supervisor Namespace containing only the NFS datastore
D. Disconnect non-NFS datastores from the ESXi hosts that make up the Supervisor cluster.

Answer: C
Explanation: The storage policy would become a storage class in Kubernetes.

Question No : 14

The Gold storage policy has been assigned to the Web namespace, and the DevOps engineer wants to place a persistent volume for the Web application in the Gold storage class.

How should this goal be accomplished?

A. Indicate the Gold storage class in the persistent volume claim specification

B. Assign the persistent volume to the Gold storage class

C. Indicate the Gold storage class in the persistent volume specification

D. Configure tag-based placement for the persistent volume

Answer: A

```
metadata:
        name: my-pvc
spec:
        accessModes:
                - ReadWriteOnce
        storageClassName: silver-storage-policy
resources:
                requests:
                        storage: 3Gi
```

Explanation:

• VM storage policies are translated into Kubernetes storage classes.

• Developers can access all assigned VM storage policies in the form of storage classes. •
Developers cannot manage storage classes.

Question No : 15

Which capability do persistent volumes provide to containerized applications?

A. Automated disk archival
B. Support for in-memory databases
C. Support for ephemeral workloads
D. Retention of application state and data

Answer: D

Explanation: Certain Kubernetes workloads require persistent storage to store data permanently. To provision persistent storage for Kubernetes workloads, vSphere with Tanzu integrates with Cloud Native Storage (CNS), a vCenter Server component that manages persistent volumes.

Persistent storage is used by vSphere Pods, Tanzu Kubernetes clusters, and VMs. The following example illustrates how persistent storage is used by a vSphere Pod.

vSphere Pods use different types of storage depending on the objects that are stored. The types of storage are ephemeral virtual machine disks (VMDKs), persistent volume VMDKs, and containers image VMDKs:

• Storage policies for container image and ephemeral disks are defined at the cluster level.
• Storage policies for persistent volumes are defined at the namespace level.
• Networking for vSphere Pods uses the topology provided by NSX.

Question No : 16

Which command would be used to deploy a Tanzu Kubernetes cluster?

A. kubectl create cluster -f CLUSTER-NAME.yaml
B. kubectl apply cluster CLUSTER-NAME.yaml
C. kubectl apply -f CLUSTER-NAME.yaml
D. kubectl create -f CLUSTER-NAME.yaml

Answer: C

Question No : 17

Which statement is true about Kubernetes Network Policies?

A. The Supervisor cluster contains a firewall to implement the network policy.

B. The policy is created by developers and applied using a YAML specification.

C. vSphere administrator adds the Kubernetes Network policy to the Development team's Namespace to implement the rules.

D. vSphere administrator creates the network policy in NSX Manager to restrict app-to-app communication.

Answer: B

Question No : 18

Which requirement is needed to deploy Tanzu Kubernetes clusters but is unnecessary when deploying vSphere Pods?

A. Harbor Image Registry
B. vSphere Single Sign-On
C. vSphere Content Library
D. Namespaces

Answer: A

Question No : 19

How is the storage selected for the Harbor pods when the embedded Harbor image registry is enabled?

A. vCenter Server automatically selects a local ESXi host datastore.
B. An administrator selects a VM storage policy as part of enablement.
C. vCenter Server automatically chooses a VM storage policy.
D. An administrator selects a specific datastore as part of enablement.

Answer: B

Explanation: Enabling Harbor Image Registry

The vSphere administrator uses the vSphere Client to enable Harbor. To enable this component, select a cluster, select Configure > Namespaces > Image Registry, and click ENABLE HARBOR:

• A VM Storage Policy is required to allocate storage for the Harbor pods.

• An IP Address, based on the ingress CIDR range, is allocated for the Harbor management interface.

• After a few minutes, Harbor is deployed and running. 184