

# VCEup

**Exam Code:** 5V0-23.20

**Exam Name:** VMware vSphere with Tanzu Specialist

**Website:** <https://VCEup.com/>

**Team-Support:** <https://VCEplus.io/>

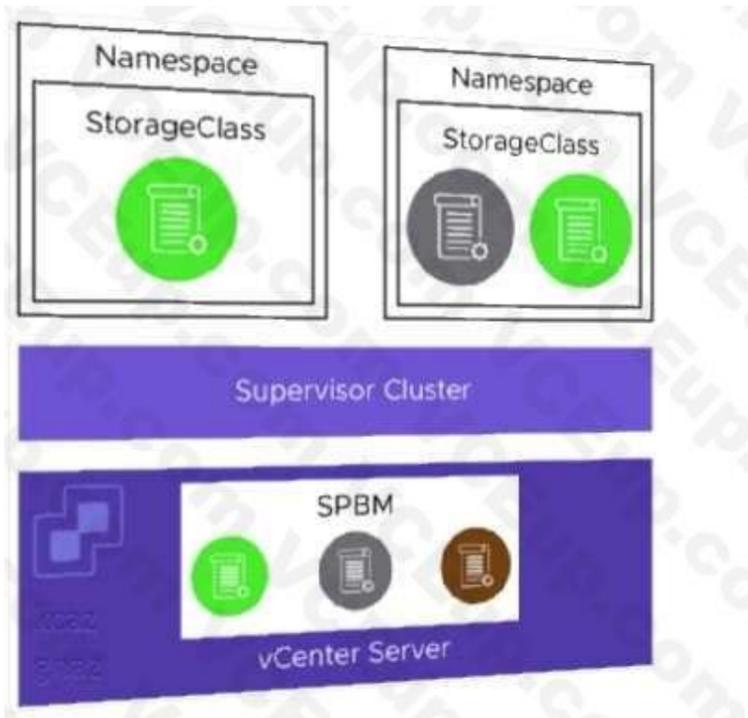


Question No: 1

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:

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.

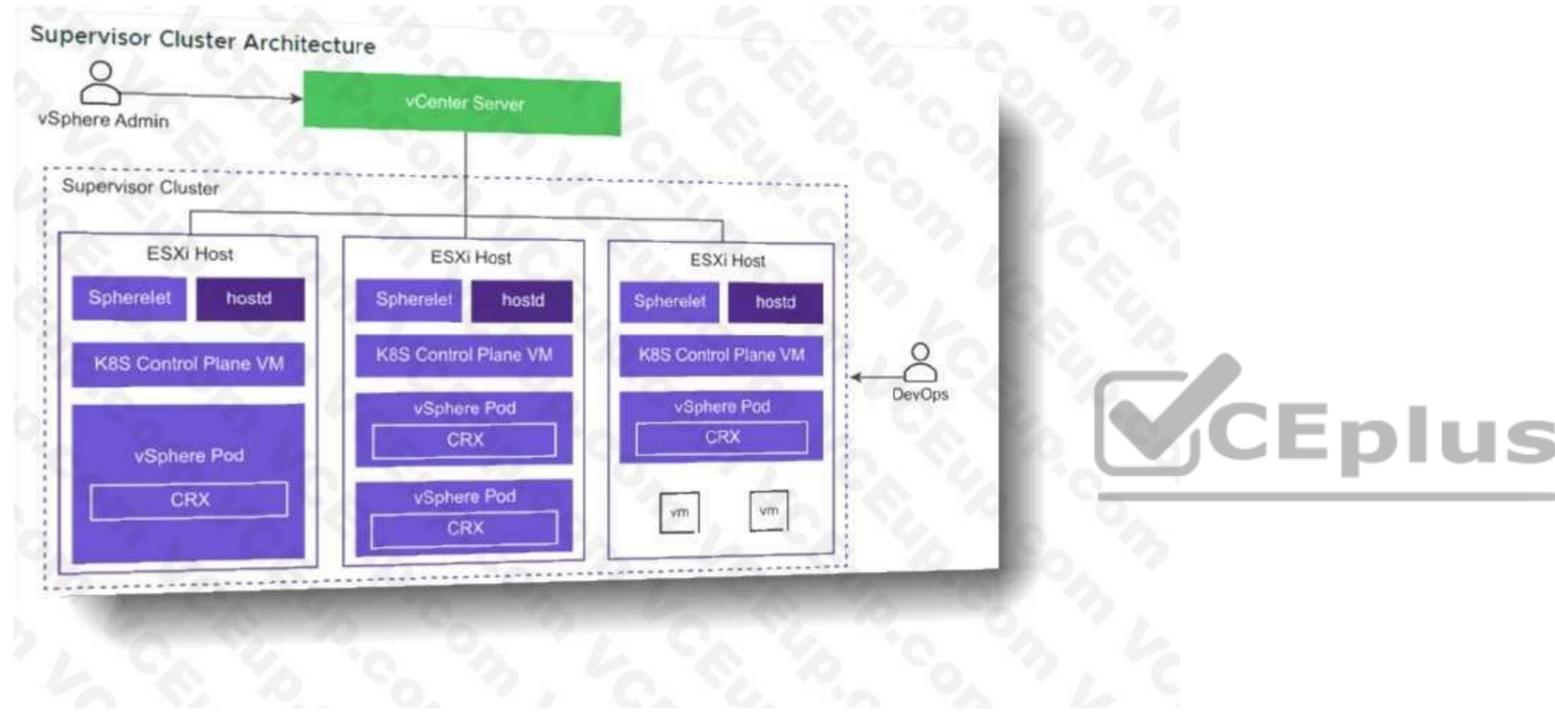
Question No: 2

Which three roles does the Spherelet perform? (Choose three )

- A. Determines placement of vSphere pods
- B. Manages node configuration
- C. Starts vSphere pods
- D. Provides a key-value store for pod configuration
- E. Communicates with Kubernetes API
- F. Provisions Tanzu Kubernetes clusters

Answer: BCE

Explanation:



Spherelet is a kubelet that is ported natively to ESXi. It allows the ESXi host to become part of a Kubernetes cluster. Spherelet performs the following functions:

- Communicates with the control plane VMs
- Manages node configuration
- Starts vSphere Pods
- Monitors vSphere Pods

Question No: 3

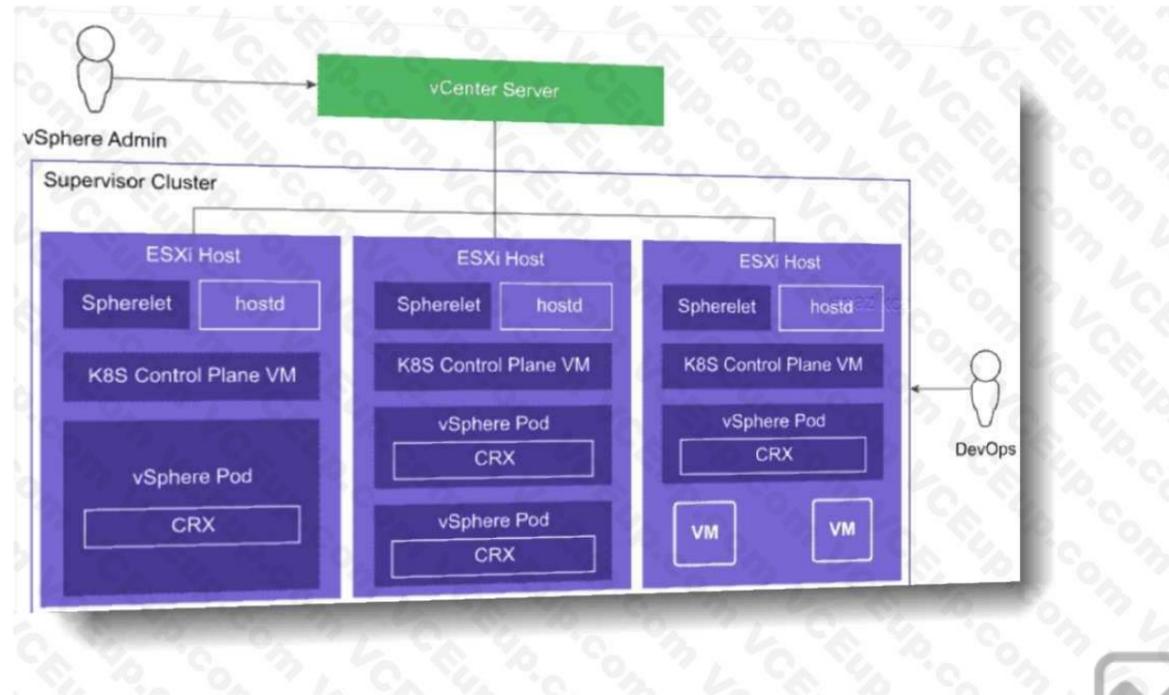
Why would developers choose to deploy an application as a vSphere Pod instead of a Tanzu Kubernetes cluster?

- A. They need the application to run as privileged pods.
- B. The application works with sensitive customer data, and they want strong resource and security isolation.
- C. They want to have root level access to the control plane and worker nodes in the Kubernetes cluster.

D. The application requires a version of Kubernetes that is above the version running on the supervisor cluster.

Answer: B

Explanation:



A vSphere Pod is a VM with a small footprint that runs one or more Linux containers. With vSphere Pods, workloads have the following capabilities:

- Strong isolation from a Linux kernel based on Photon OS
- Resource management using DRS
- Same level of resource isolation as VMs
- Open Container Initiative (OCI) compatible
- Equivalent to a Kubernetes Container Host vSphere Pods are not compatible with vSphere vMotion. When an ESXi host is placed into maintenance mode, running vSphere Pods are drained and redeployed on another ESXi host, but only if the vSphere Pod is part of a ReplicaSet.

Question No: 4

A company needs to provide global visibility and consistent policy management across multiple Tanzu Kubernetes Clusters, namespaces, and clouds Which VMware solution will meet these requirements'?

- A. vSphere with Tanzu Supervisor Cluster
- B. vCenter Server
- C. Tanzu Mission Control
- D. Tanzu Kubernetes Grid Service

Answer: C

Explanation:



VMware Tanzu Mission Control™ is a centralized management platform for consistently operating and securing your Kubernetes infrastructure and modern applications across multiple teams and clouds.

Question No: 5

A developer is connecting to a Tanzu Kubernetes Cluster using the `kubectl vsphere login` command. Which information must be specified, in addition to both the name of the cluster and the Supervisor Cluster Control Plane IP?

- A. The path to the existing kubeconfig file and the SSO Username
- B. The path to the existing kubeconfig file and the Token ID for the SSO credentials
- C. The name of the Supervisor Namespace and the Token ID for the SSO credentials
- D. The name of the Supervisor Namespace and the SSO Username

Answer: D

Explanation:

To connect to the Supervisor Cluster, run the following command. `kubectl vsphere login --server=SUPERVISOR-CLUSTER-CONTROL-PLANE-IP --tanzu-kubernetes-cluster-name TANZU-KUBERNETES-CLUSTER-NAME --tanzu-kubernetes-cluster-namespace SUPERVISOR-NAMESPACE-WHERE-THE-CLUSTER-IS-DEPLOYED --vsphere-username VCENTER-SSO-USER-NAME` For example: `kubectl vsphere login --server=10.92.42.137 --tanzu-kubernetes-cluster-name tanzu-kubernetes-cluster-01 --tanzu-kubernetes-cluster-namespace tanzu-ns-1 --vsphere-username administrator@example.com`

Question No: 6

Which value must be increased or decreased to horizontally scale a Tanzu Kubernetes cluster?

- A. Namespaces
- B. etcd instance
- C. Worker node count

D. ReplicaSets

Answer: C

Explanation:

Scale a Cluster Horizontally With the Tanzu CLI

To horizontally scale a Tanzu Kubernetes cluster, use the `tanzu cluster scale` command. You change the number of control plane nodes by specifying the `--controlplane-machine-count` option. You change the number of worker nodes by specifying the `--worker-machine-count` option.

Question No: 7

Which two container network interfaces (CNIs) are supported with Tanzu Kubernetes clusters created by the Tanzu Kubernetes Grid Service? (Choose two )

A. NSX-T

B. Weave Net

C. Flannel

D. Antrea

E. Calico

Answer: DE

Explanation:

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-A7756D67-0B95-447D-A645-E2A384BF8135.html>

A Tanzu Kubernetes cluster provisioned by the Tanzu Kubernetes Grid Service supports two CNI options: Antrea (default) and Calico. Both are open-source software that provide networking for cluster pods, services, and ingress.

Tanzu Kubernetes clusters provisioned by the Tanzu Kubernetes Grid Service support the following Container Network Interface (CNI) options:

Antrea

Calico



Tanzu Kubernetes Grid Service CNI

Tanzu Kubernetes Grid Service supports Antrea and Calico as container network interfaces (CNI).

The default CNI in vSphere 7 Update 1 is Antrea.

Antrea is a VMware-supported, open source, Kubernetes-native project that implements the container network interface (CNI) and Kubernetes network policy, providing network connectivity and security for pod workloads. Antrea extends the benefit of programmable networks from Open vSwitch (OVS) to Kubernetes.

For more information about Antrea, see <https://antrea.io/>

Question No: 8

Where are the virtual machine images stored that are used to deploy Tanzu Kubernetes clusters?

- A. Content Library
- B. Supervisor Cluster
- C. Harbor Image Registry
- D. Namespace

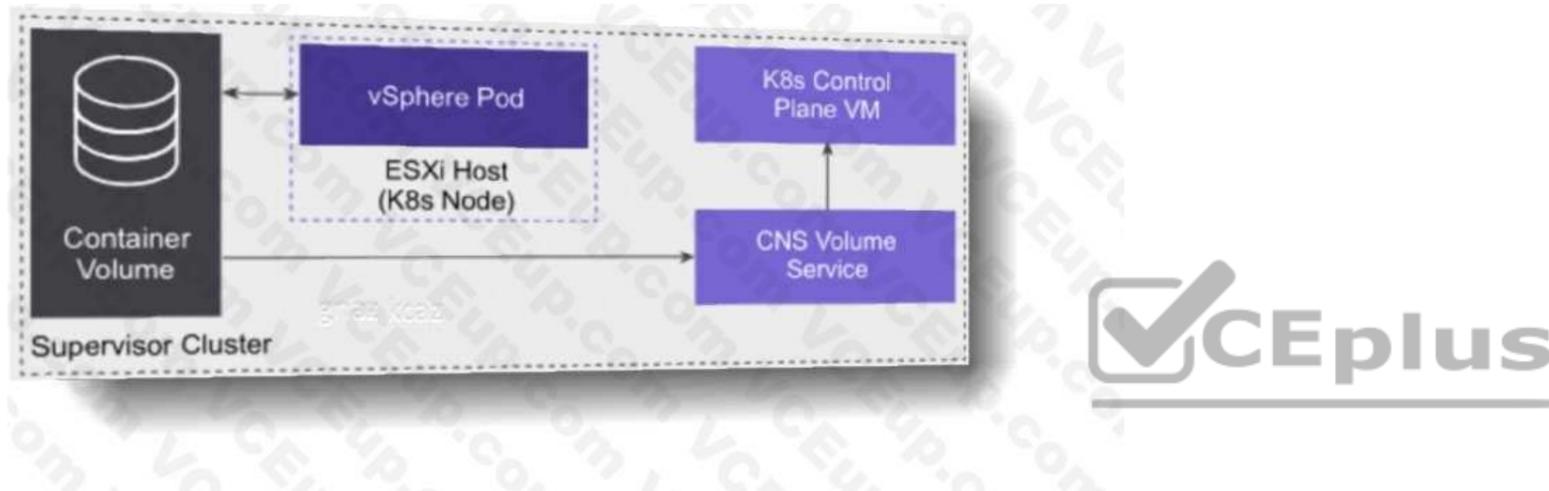
Answer: A

Explanation:

The vSphere administrator configures a Subscribed Content Library on the Supervisor Cluster. The virtual machine image that is used for the Tanzu Kubernetes cluster nodes is pulled from this library.

A Subscribed Content Library originates from a Published Content Library. After the subscription is created, the system synchronizes it with the published library. To create the Tanzu Kubernetes cluster nodes, VMware publishes a Photon OS OVA library to which you subscribe. After the subscriber is synchronized with the publisher, you associate the content library with the Supervisor Cluster.

Question No: 9



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.

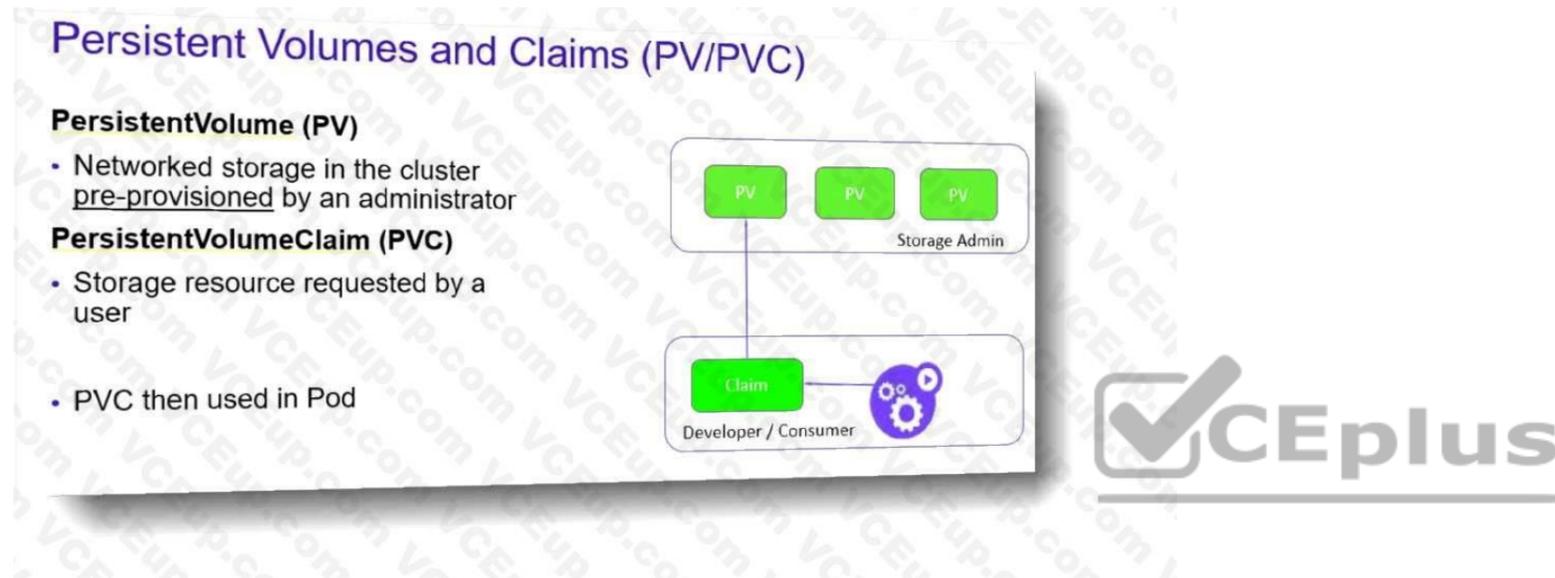
- Networking for vSphere Pods uses the topology provided by NSX.

Question No: 10

What is the proper way to delete a Persistent Volume Claim?

- A. By using the kubectl delete persistentvolumeclaim command
- B. By using the kubectl remove pvc command
- C. Through the SPBM policy engine using the vSphere Client
- D. By unmounting the volume from the VM and deleting it from the vSphere datastore

Answer: A



Explanation:

Also, kubectl delete pvc, which is much shorter.

DevOps engineers create persistent volume claims to request persistent storage resources. The request provisions a persistent volume object and a matching virtual disk. In the vSphere Client, the persistent volume claim manifests as an FCD virtual disk that can be monitored by vSphere administrators.

The claim is bound to the persistent volume. The workloads can use the claim to mount the persistent volumes and access storage.

When the DevOps engineers delete the claim, the corresponding persistent volume object and the provisioned virtual disk are also deleted.

Question No: 11

Which command will show the Tanzu Kubernetes cluster versions available in the vSphere content library?

- A. kubectl get rc,services
- B. kubectl get contentlibrary
- C. kubectl get tanzukubernetesreleases
- D. kubectl get tanzuimages

Answer: C

Explanation: `kubectl get tanzukubernetesreleases` List available Tanzu Kubernetes releases. `kubectl get tkr` Short form version of the preceding command. `kubectl get tkr v1.17.8---vmware.1-tkg.1.5417466 -o yaml` Provides details on the named Tanzu Kubernetes release.

VMware Tanzu distributes Kubernetes software versions as Tanzu Kubernetes releases. To consume these releases, you configure a vSphere Content Library and synchronize the available releases. You can do so using a subscription-based model, or on-demand. If you want to provision Tanzu Kubernetes in an internet restricted environment, you can create a local library and manually import the releases.

```

ubuntu@cli-vm:~$ kubectl get tanzukubernetesreleases
NAME                                VERSION
v1.16.12---vmware.1-tkg.1.da7afe7  1.16.12+vmware.1-tkg.1.da7afe7
.v1-tkg.1.ada4837]
v1.16.14---vmware.1-tkg.1.ada4837  1.16.14+vmware.1-tkg.1.ada4837
v1.16.8---vmware.1-tkg.3.60d2ffd    1.16.8+vmware.1-tkg.3.60d2ffd
.v1-tkg.1.ada4837]
v1.17.11---vmware.1-tkg.1.15f1e18   1.17.11+vmware.1-tkg.1.15f1e18
.v1-tkg.1.d44d45a]
v1.17.11---vmware.1-tkg.2.ad3d374   1.17.11+vmware.1-tkg.2.ad3d374
.v1-tkg.1.d44d45a]
v1.17.13---vmware.1-tkg.2.2c133ed   1.17.13+vmware.1-tkg.2.2c133ed
.v1-tkg.1.d44d45a]
v1.17.17---vmware.1-tkg.1.d44d45a   1.17.17+vmware.1-tkg.1.d44d45a
v1.17.7---vmware.1-tkg.1.154236c    1.17.7+vmware.1-tkg.1.154236c
.v1-tkg.1.d44d45a]
v1.17.8---vmware.1-tkg.1.5417466    1.17.8+vmware.1-tkg.1.5417466
.v1-tkg.1.d44d45a]
v1.18.10---vmware.1-tkg.1.3a6cd48   1.18.10+vmware.1-tkg.1.3a6cd48
1-tkg.2.ebf6117]

```

Question No: 12

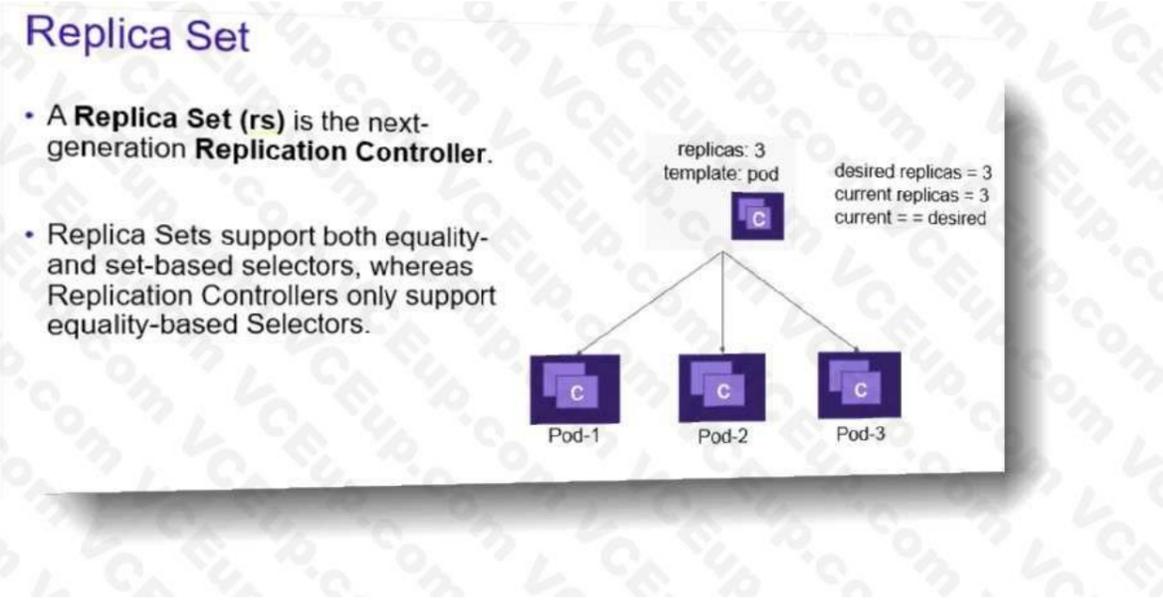
Which object helps maintain copies of a vSphere pod?

- A. ReplicaSets
- B. Network Policies
- C. Namespaces
- D. Persistent Volume

Answer: A

Explanation:





A ReplicaSet declares how the functionality of a pod is made scalable and resilient through redundancy. The ReplicaSet ensures that a specified number of pods is kept running. Example:

Deploy a ReplicaSet. • The ReplicaSet name is nginx-replica-demo. • Two replicas are expected to be running. • The ReplicaSet applies to pods with label nginx.

For more information about Kubernetes replica sets, see

<https://kubernetes.io/docs/concepts/workloads/controllers/replicaset/>

Question No: 13

On which network are TKG clusters deployed in vSphere with Tanzu when using the vSphere networking stack?

- A. Workload
- B. Backend
- C. Edge
- D. Frontend

Answer: A

Explanation:

The Workload Network, such as TKGS-VLAN1000, is where the Tanzu Kubernetes clusters run.

A workload network is a network construct that is used by supervisor control plane VMs and vSphere namespaces:

- The workload network is supported by a vSphere Distributed Switch port group.
- An IP range is defined to allocate an IP address for VMs attached to the workload network.
- A primary workload network must be selected.
- The supervisor control plane VMs attach to the primary workload networks port group.

A workload network can be used by multiple namespaces. A namespace can be assigned only one workload network.

Question No: 14



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:

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



<https://docs.docker.com/docker-hub/repos/>

- 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. `docker-credential-vsphere login <container-registry-IP> --user username@domain.com` 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: `docker tag <image-name>[:TAG] <container-registry-IP>/<project-name>/<image-name>[:TAG]` For example: `docker tag hello-world:latest 10.179.145.77/tkgs-cluster-ns/hello-world:latest` docker images REPOSITORY TAG IMAGE ID CREATED SIZE 10.179.145.77/tkgs-cluster-ns/hello-world latest bf756fb1ae65 10 months ago 13.3kB hello-world latest bf756fb1ae65 10 months ago 13.3kB To push an image to a project in Harbor, run the following command: Syntax: `docker push <container-registry-IP>/<namespace-name>/<image_name>` For example: `docker push 10.179.145.77/tkgs-cluster-ns/hello-world:latest` Expected result.

The push refers to repository [10.179.145.77/tkgs-cluster-ns/hello-world] 9c27e219663c: Pushed latest: digest: sha256:90659bf80b44ce6be8234e6ff90a1ac34acbeb826903b02cfa0da11c82cbc042 size: 525

Question No: 15

Which functionality does the Cloud Native Storage (CNS) component take advantage of to support the creation of container volumes?

- A. First Class Disk
- B. VMware Disk Encryption

C. Virtual Disk

D. Storage Based Policy Management

Answer: A

Explanation:

The Cloud Native Storage server resides in vCenter Server:

- Provisions and manages life cycle operations for container volumes
  - Creates First Class Disks (FCDs) to support the container volumes
  - First Class Disks exist as .vmdk and -flat.vmdk files on a vSphere datastore
  - Integrates with storage policy based management (SPBM) for the placement of disks
- A First Class Disk (FCD) is also called an improved virtual disk. It is a named virtual disk that is unassociated with a VM. These disks reside on a VMFS, NFS, or vSAN datastore and support container volumes.

Storage policy based management (SPBM) is a vCenter Server service that supports provisioning of persistent volumes according to specified storage requirements. After provisioning, the service monitors compliance of the volume with the required policy characteristics.

Question No: 16

Which step in vSphere with Tanzu enablement using the vSphere Distributed Switch process is done prior to using the Workload Management Enablement Wizard?

- A. Deploy the load balancer
- B. Choose the Kubernetes content library that should be used in the Supervisor Cluster
- C. Define the Primary workload network P range
- D. Define the Management network interfaces for the Supervisor Cluster

Answer: D

Explanation:

As a vSphere administrator, you can enable the Workload Management platform on a vSphere cluster by configuring the vSphere networking stack to provide connectivity to workloads. A Supervisor Cluster that is configured with vSphere networking supports the deployment of Tanzu Kubernetes clusters created by using the Tanzu Kubernetes Grid Service. It does not support running vSphere Pod or using the embedded Harbor Registry.

Question No: 17

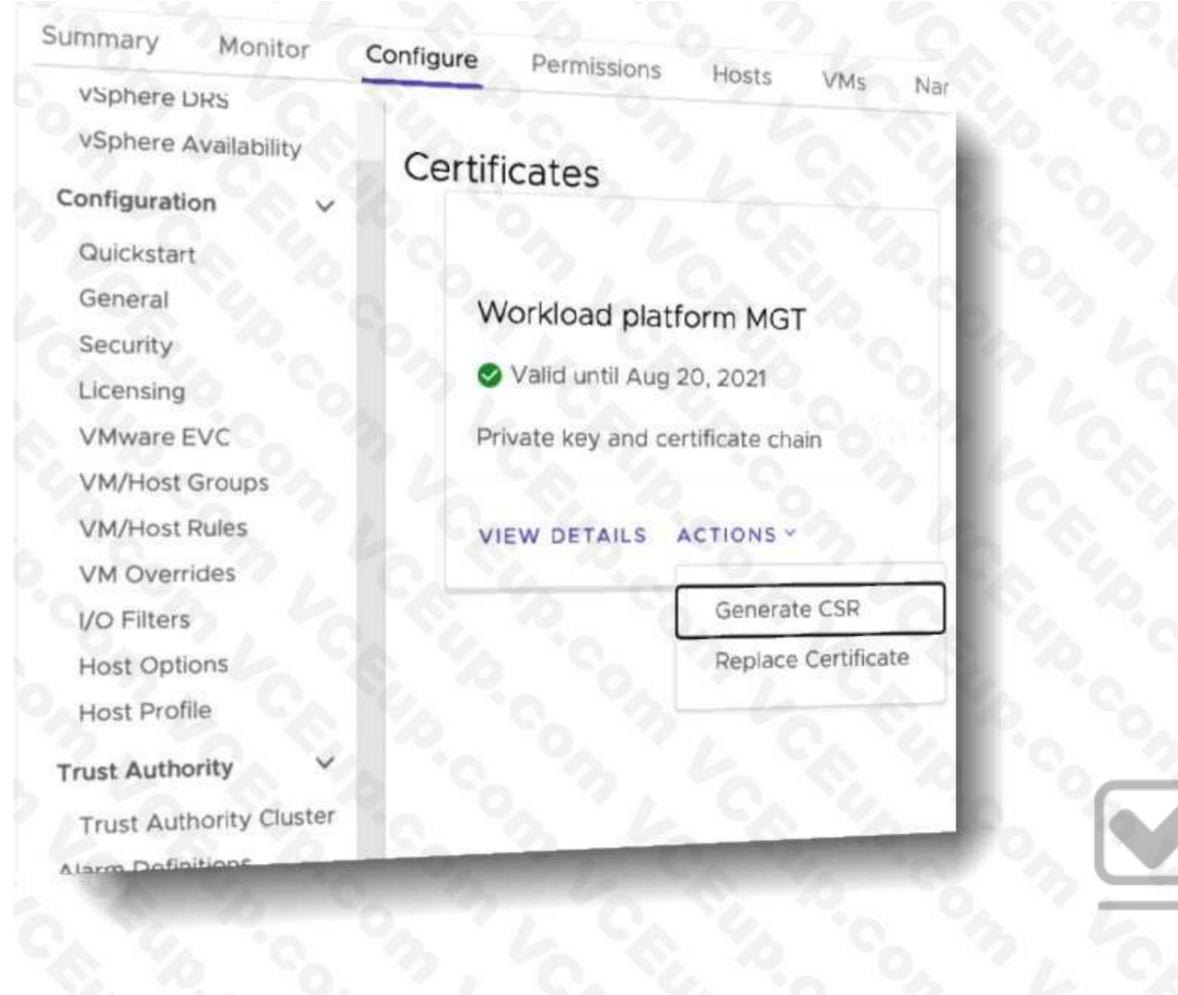
How can a vSphere administrator replace the Supervisor Cluster API endpoint certificate?

- 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: 18

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

Explanation:

```
apiVersion: v1
kind: PersistentVolumeClaim
metadata:
  name: my-pvc
spec:
  accessModes:
    - ReadWriteOnce
  storageClassName: silver-storage-policy
resources:
  requests:
    storage: 3Gi
```



- 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: 19

An administrator is tasked with increasing the amount of CPU and memory in an existing Tanzu Kubernetes cluster.

Which change must the administrator complete to ensure the cluster scales successfully when updating the YAML definition?

- A. Manually update the CPU and memory of the nodes
- B. Update the Virtual Machine Class Type
- C. Increase the number of worker nodes
- D. Increase the number of control plane nodes

Answer: B

Explanation:

Virtual Machine Class Types for Tanzu Kubernetes Clusters

A virtual machine class defines the resource sizing for Tanzu Kubernetes cluster VMs: • CPU • Memory • Storage Virtual machine class types range from extra small (xsmall) to extra large (xlarge). Class types are categorized as guaranteed or best effort:

- Guaranteed: Reserve all CPU and memory allocations.
- Best effort: Allocate the same CPU and memory but do not reserve the resources.

The class type guaranteed-small allocates 2 CPU, 4 GB of memory, and 16 GB of storage and reserves CPU and memory allocations. Custom virtual machine class types cannot be defined.

Question No: 20

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: 21

Which command should be used by a developer to log in to the vSphere with Tanzu Supervisor Cluster?

A. `vmwarectl login --server=<KUBERNETES-CONTROL-PLANE-IP-ADDRESS> --vsphere-username`

`<VCENTER-SSO-USER>`

B. `kubectl vsphere login --server=<KUBERNETES-CONTROL-PLANE-IP-ADDRESS> --vsphereusername`

`<vcENTER-SSO-USER>`

C. `vmwarectl vsphere login --server=<KUBERNETES-CONTROL-PLANE-IP-ADDRESS> --vsphereusername`

`<VCENTER-SSO-USER>`

D. `kubectl login --server=<KUBERNETES-CONTROL-PLANE-IP-ADDRESS> --vsphere-username`

`<VCENTER-SSO-USER>`

Answer: B



Explanation:

Authenticating Using kubectl

In vSphere with Tanzu, authentication is performed using vCenter Single Sign-On. You run the command `kubectl vsphere login` to authenticate a user through vCenter Single Sign-On to Kubernetes clusters. `kubectl vsphere login --server <kubernetes control plane> -u <username>` The `--insecure-skip-tls-verify` flag is required if the certificate presented by the vSphere with Tanzu control plane is not trusted by the client machine. The control plane is signed by the vCenter Server VMware CA by default. You can replace the control plane certificate with a trusted certificate if needed. Alternatively, install the vCenter Server VMware CA root certificate into your client machine to remove the need for the `--insecure-skip-tls-verify` flag.

Question No: 22

Which external load balancer is supported in vSphere 7 U1 using the vSphere networking stack?

- A. Nginx
- B. Seesaw
- C. Loadmaster
- D. HAProxy

Answer: D

Explanation:

When using vSphere with Tanzu with vDS networking, HAProxy provides load balancing for developers accessing the Tanzu Kubernetes control plane, and for Kubernetes Services of Type Load Balancer. Review the possible topologies that you can implement for the HAProxy load balancer.

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-1F885AAE-92FF-41E6-BF04-0F0FD4173BD9.html>

The HAProxy appliance is an open-source solution developed by HAProxy Technologies and chosen by VMware as the first supported open-source load balancer for use with vSphere with Tanzu. With the HAProxy, external network traffic is routed to Kubernetes pods running in the vSphere with Tanzu environment.



Question No: 23

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 `kubect1` commands are typically actioned against the current active namespace.

View the list of available namespaces: `kubect1 config get-contexts` Change the current active namespace: `kubect1 config use-context <namespace>`

Question No: 24

What is required to enable Workload Management?

- A. vSphere Distributed Switch
- B. Windows Network Load Balancer
- C. Github repository
- D. NSX-V

Answer: A

Explanation:

<https://docs.vmware.com/en/VMware-vSphere/7.0/vsphere-esxi-vcenter-server-702-vsphere-withtanzu-guide.pdf>

Configuring Workload Networks You configure one or more workload networks and their respective IP address ranges.

Each workload network is assigned a vSphere Distributed Switch port group and uses a defined IP range to allocate IP addresses to workloads (VMware Tanzu Kubernetes clusters).

Question No: 25

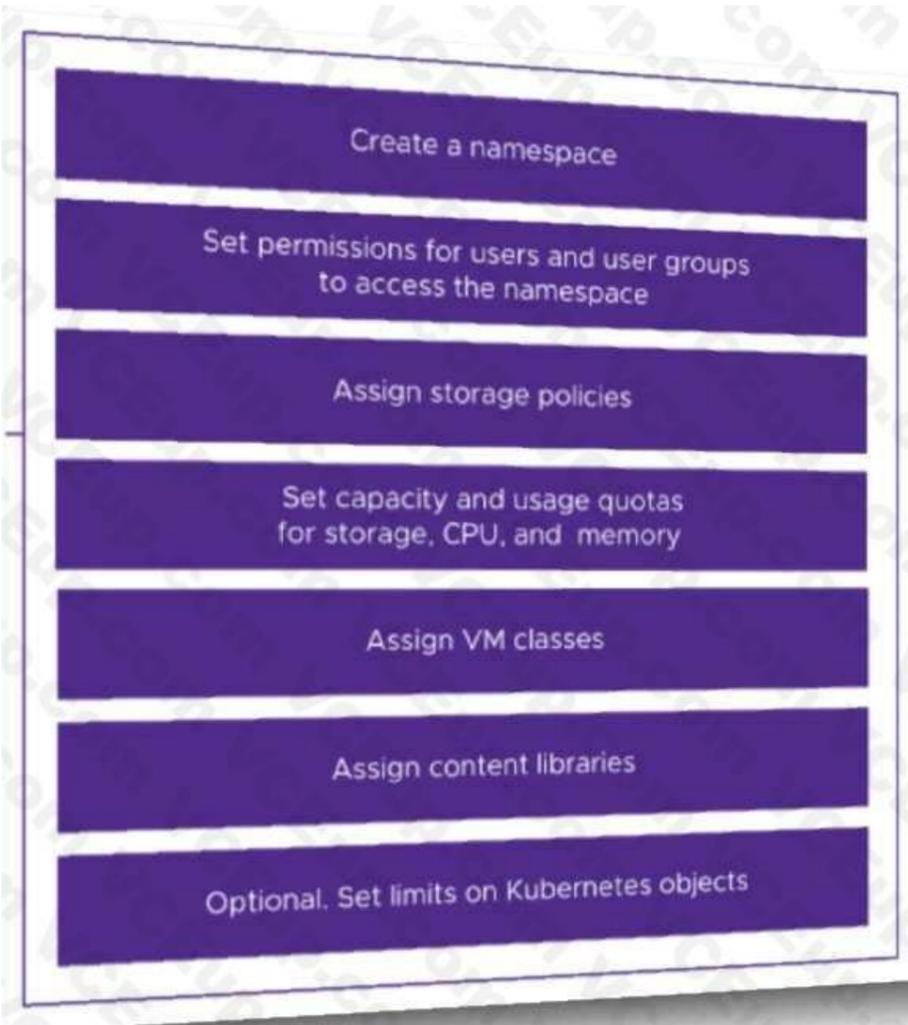
Which role should the vSphere administrator apply for the developer?

- A. Assign the developer user with the "can edit" role at the vSphere Namespace object.
- B. Assign the developer user with the "vSphere Kubernetes Manager" role at the vSphere Namespace object.
- C. Assign the developer user with the "vSphere Kubernetes Manager" role at the cluster object.
- D. Assign the developer user with the "can edit" role at the cluster object.

Answer: A

Explanation:





Permissions for programmers should be assign at the Namespace level, typically using groups and roles.

You assign roles for the Namespace to Active Directory groups. You can later assign access to users by adding them to these groups. You assign access to separate Active Directory groups for the edit and view roles in the Namespace.

Question No: 26

A vSphere administrator is required to provide a developer with read/write permissions on a vSphere Namespace.

- A. It is a Kubernetes cluster deployed by developers using a YAML specification file.
- B. It aggregates hosts across vSphere clusters to form a Kubernetes cluster on vSphere.
- C. It enables vSphere High Availability and Distributed Resource Scheduler.
- D. It exposes a Kubernetes API for use by DevOps teams.

Answer: B

Explanation:

Question No: 27

On which cluster can a Supervisor Namespace be created?

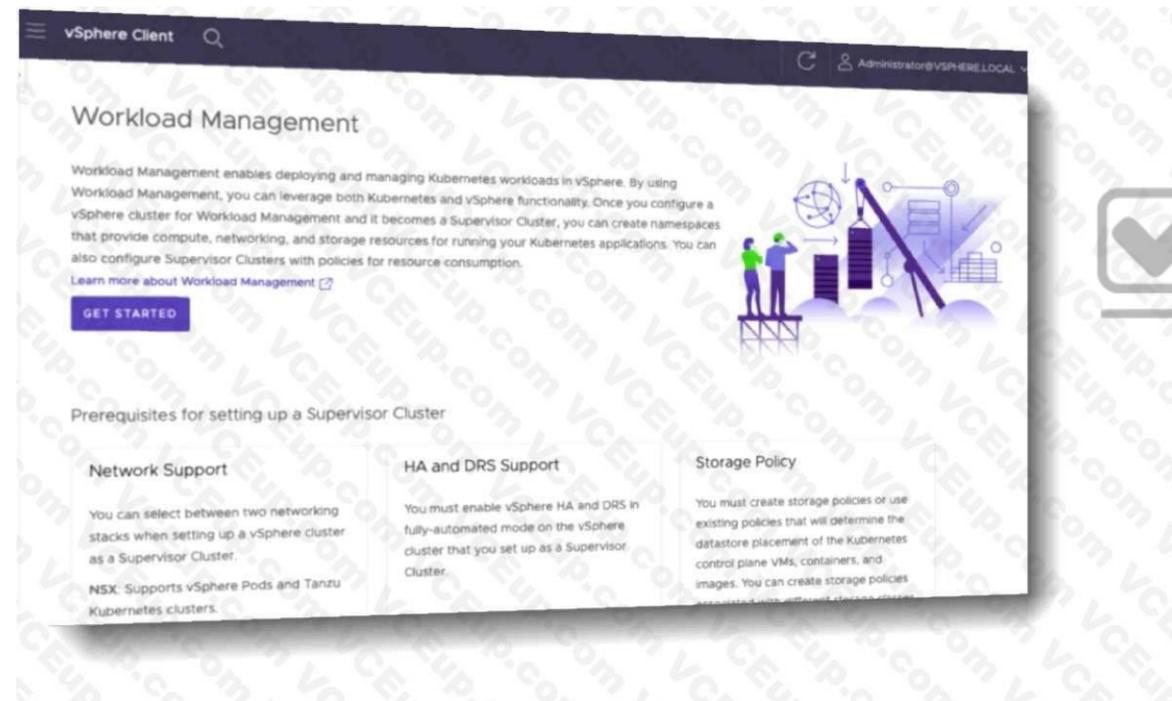
- A. A Tanzu Kubernetes Grid Integrated cluster
- B. A vSphere 7 cluster enabled with Workload Management
- C. A Tanzu Kubernetes cluster
- D. A vSphere 6.7 cluster enabled with Workload Management

Answer: B

Explanation:

A Supervisor Cluster namespace is a combination of resource allocations and permissions set within the Supervisor Cluster. When you create a Supervisor Namespace, you'll assign who has access to use it, and how many of the ESXi cluster's resources you can use (much like a resource pool).

When you enabled the Workload Management components, you created a special Kubernetes cluster called the "Supervisor Cluster". You can continue to deploy virtual machines in this cluster, and you can also deploy Kubernetes pods as a "pod vm" which is basically a container with some special wrapping so they are better isolated, like a virtual machine is.



Question No: 28

Which command provides valid syntax to deploy a vSphere Pod?

- A. tkg apply -c containerName
- B. docker run containerName
- C. kubectl apply -f deployment.yaml
- D. kubectl apply -t deployment.yaml

Answer: C

Explanation:

You can deploy an application on a namespace on a Supervisor Cluster. Once the application is deployed, the respective number of vSphere Pods are created on the Supervisor Cluster within the namespace.

Common kubectl commands include the apply, get, describe, and delete commands:

- The kubectl apply command applies the contents of a YAML file. Typically, this command is used to create a pod or deployment: — kubectl apply -f /path/to/my.yaml
- The kubectl get command returns basic information about an object: — kubectl get pod

<pod\_name\_name>

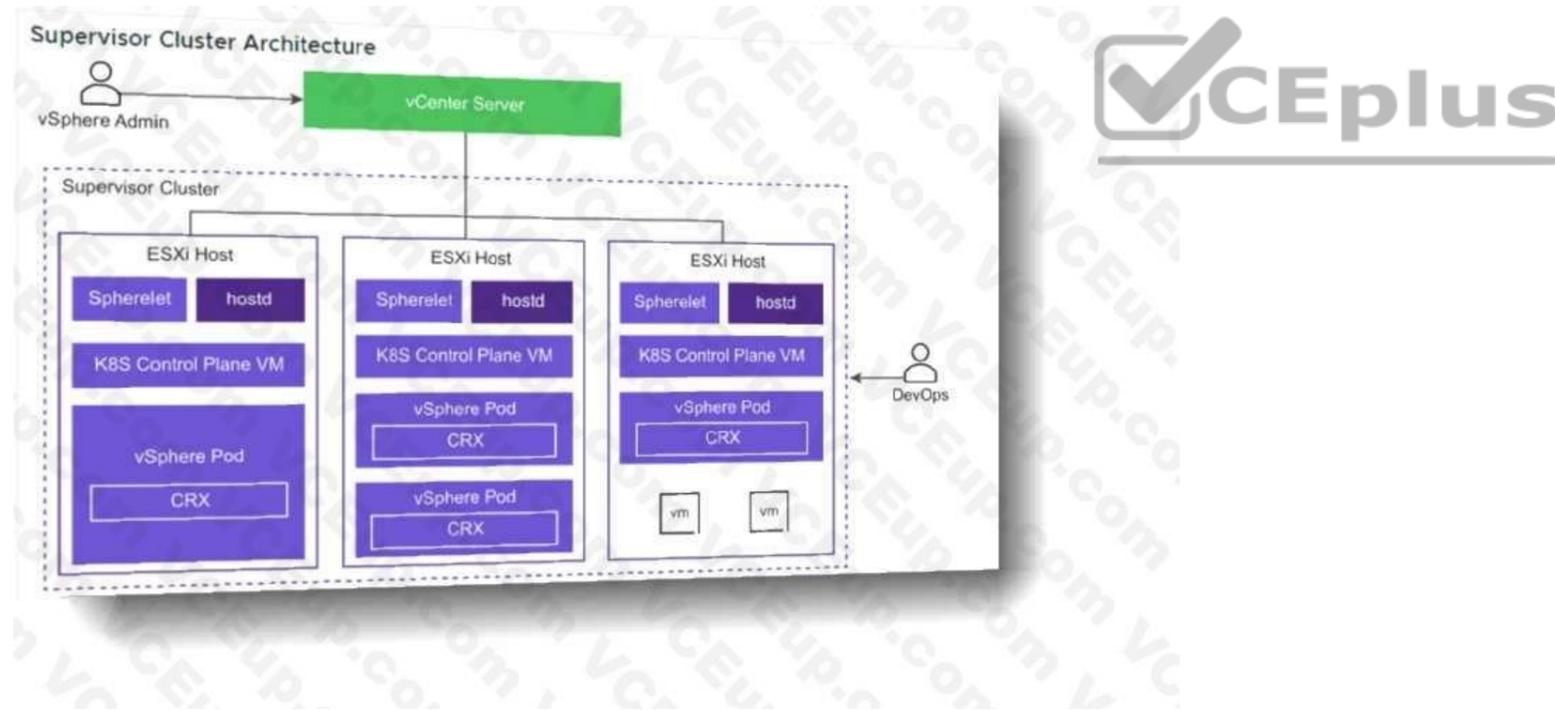
Question No: 29

Which statement describes a characteristic of Supervisor Cluster control plane VMs?

- A. Manage the lifecycle of ESXi hosts
- B. Are manually created by a vSphere administrator
- C. Host developer workloads
- D. Run system and infrastructure pods

Answer: D

Explanation:



The Supervisor Cluster provides the management layer on which Tanzu Kubernetes clusters are built.

The Tanzu Kubernetes Grid Service is a custom controller manager with a set of controllers that is part of the Supervisor Cluster. The purpose of the Tanzu Kubernetes Grid Service is to provision Tanzu Kubernetes clusters.

While there is a one-to-one relationship between the Supervisor Cluster and the vSphere cluster, there is a one-to-many relationship between the Supervisor Cluster and Tanzu Kubernetes clusters.

You can provision multiple Tanzu Kubernetes clusters within a single Supervisor Cluster. The workload management functionality provided by the Supervisor Cluster gives you control over the cluster configuration and lifecycle, while allowing you to maintain concurrency with upstream Kubernetes.

Question No: 30

The creation of which object by an administrator in the vSphere client automatically results in the creation of a new segment within NSX -T?

- A. Service
- B. Pod
- C. Network policy
- D. Namespace

Answer: D

Explanation:

NSX Container Plugin (NCP) runs as a pod on the control plane VMs. It listens for requests for network objects to the API server and interfaces with the NSX Manager to create, update, or delete those objects:

- A request to create a namespace results in a new NSX segment.
- A request to deploy a pod results in a segment port request and IP assignment.
- A request to create a service results in a new virtual server.
- A request to create a network policy results in a new distributed firewall rule.

Question No: 31

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: 32

Which two functions are provided by the NSX Container Rug-in (NCP)? (Choose two.)

- A. Implements Kubernetes Ingress with an NSX-T layer 7 load balancer
- B. Integrates with container-based PaaS such as Docker
- C. Creates an NSX-T logical topology for a Kubernetes cluster and a separate logical network for each Kubernetes namespace



D. Configures Overlay Transport Zones

E. Implements Kubernetes Ingress with an NSX-T layer 4 load balancer

Answer: AC

Explanation:

NCP provides the following functionalities:

Automatically creates an NSX-T Data Center logical topology for a Kubernetes cluster, and creates a separate logical network for each Kubernetes namespace.

Implements Kubernetes Ingress with NSX-T layer 7 load balancer

Connects Kubernetes pods to the logical network, and allocates IP and MAC addresses.

Supports network address translation (NAT) and allocates a separate SNAT IP for each Kubernetes namespace. Note: When configuring NAT, the total number of translated IPs cannot exceed 1000.

Implements Kubernetes network policies with NSX-T Data Center distributed firewall.

Implements Kubernetes service of type ClusterIP and service of type LoadBalancer.

Question No: 33

How do Tanzu Kubernetes clusters communicate with Storage Policy Based Management to request PersistentVolumes?

A. Through a proxy VM

B. Directly with vCenter Server and the underlying ESXi hosts

C. Through the Supervisor Cluster

D. Directly with the vCenter Server

Answer: D

Explanation:

The Cloud Native Storage for vSphere with Tanzu workflow is as follows:

1. A developer deploys a pod using the kubectl CLI.
2. The vSphere with Tanzu Cloud Native Storage-Container Storage Interface (CNS-CSI) reads this request from the control plane API server.
3. CNS-CSI informs the vCenter Server CNS of the need for a disk with storage class Gold.
4. CNS interfaces with SPBM for a suitable datastore that satisfies the Gold storage class (storage policy).
5. SPBM decides on a suitable datastore and interfaces with DRS for a suitable ESXi host.
6. Hostd on the ESXi host creates a First Class Disk (VMDK) on the datastore.
7. Spherelet on the ESXi host takes the created VMDK.
8. Spherelet mounts the VMDK to the vSphere Pod.
9. Spherelet reports the mount as a successful event to the control plane API server.

Question No: 34

Which kubectl command is used to list all pods in the current active namespace?



- A. kubectl get nodes
- B. kubectl get pods
- C. kubectl get services
- D. kubectl list pods

Answer: B

Explanation:

Fetch all Pods in all namespaces using `kubectl get pods --all-namespaces`

Pods

Shortcode = `po`

List one or more pods

`kubectl get pod`

Delete a pod

`kubectl delete pod <pod_name>`

Display the detailed state of a pods

`kubectl describe pod <pod_name>`

Create a pod

`kubectl create pod <pod_name>`

Execute a command against a container in a pod

`kubectl exec <pod_name> -c <container_name> <command>`

Get interactive shell on a a single-container pod

`kubectl exec -it <pod_name> /bin/sh`

Display Resource usage (CPU/Memory/Storage) for pods

`kubectl top pod`

Add or update the annotations of a pod

`kubectl annotate pod <pod_name> <annotation>`

Add or update the label of a pod

`kubectl label pod <pod_name>`



Question No: 35

Which vSphere with Tanzu Workload Network topology provides Layer 2 isolation between Tanzu Kubernetes clusters across namespaces when vSphere Distributed Switches are used?

- A. A dedicated Primary Workload Network for the Supervisor Cluster control plane VMs and separate Workload Networks for each namespace A dedicated Primary
- B. Workload Network for the Supervisor Cluster control plane VMs and a single Workload Network for namespaces
- C. A single Workload Network for the Supervisor Cluster control plane VMs and Tanzu Kubernetes clusters
- D. Distributed firewall rules to isolate namespaces

Answer: A

Explanation:

For a Supervisor Cluster that is configured with the vSphere networking stack, you can provide Layer 2 isolation for your Kubernetes workloads by creating Workload Networks and assigning them to namespaces. Workload Networks provide connectivity to Tanzu Kubernetes clusters in the namespace and are backed by distributed port groups on the switch that is connected to the hosts in the Supervisor Cluster.

Question No: 36

To which network are HA Proxy virtual server IP addresses issued when using the vSphere networking stack default configuration?

- A. vMotion
- B. Overlay
- C. Primary workload
- D. Management

Answer: C

Explanation:

The HAProxy virtual IP range where external services and DevOps users connect. In this configuration, HAProxy is deployed with two virtual NICs (Default configuration), one connected to the management network, and a second one connected to the Primary Workload Network. You must plan for allocating Virtual IPs on a separate subnet from the Primary Workload Network.

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-1F885AAE-92FF-41E6-BF04-0F0FD4173BD9.html>

Question No: 37

How is information found about all Kubernetes Persistent Volumes in a vSphere environment?

- A. Navigating to the Cloud Native Storage view in vCenter Server
- B. Using: kubectl get persistentvolumes
- C. Accessing the FCD folder on a Datastore
- D. Using: esxcli storage cloud native get

Answer: A

Explanation:



This is the textbook answer, I know kubectl does give you some information.

Question No: 38

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: 39

Kubernetes object types are going to be limited by an administrator within a vSphere with Tanzu namespace. Which three Kubernetes object types may be limited? (Choose three.)

A. Number of Persistent Volume Claims

B. Number of Pods

C. Number of Operators

D. Number of DaemonSets

E. Number of Ingress frontends

F. Number of Load Balancer Services

Answer: ABF

Explanation:

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-1238AFD8-232C-4EFC-BD54-796CB9F8C45F.html>

Resource Name Description

configmaps The total number of ConfigMaps that can exist in the namespace. persistentvolumeclaims The total number of PersistentVolumeClaims that can exist in the namespace.

pods The total number of Pods in a non-terminal state that can exist in the namespace. A pod is in a terminal state if .status.phase in (Failed, Succeeded) is true.

replicationcontrollers The total number of ReplicationControllers that can exist in the namespace. resourcequotas The total number of ResourceQuotas that can exist in the namespace.

services The total number of Services that can exist in the namespace.

services.loadbalancers The total number of Services of type LoadBalancer that can exist in the namespace.

services.nodeports The total number of Services of type NodePort that can exist in the namespace.

secrets The total number of Secrets that can exist in the namespace.

Question No: 40

Which two capabilities are associated with vSphere Pod? (Choose two.)



- A. Compatibility with vSphere vMotion
- B. Compatibility with vSphere performance charts
- C. Compatibility with NSX-V Datacenter
- D. Compatibility with vSphere HA and DRS
- E. Compatibility with Windows and Linux kernels

Answer: CD

Explanation: vSphere Pods are only supported on Supervisor Clusters that use NSX-T Data Center as their networking stack.

Resource Management. vSphere DRS handles the placement of vSphere Pods on the Supervisor Cluster.

Question No: 41

Why would an organization set up private image registries?

- A. Role-based access control can be assigned by integrating the image registry with user identity management.
- B. DevOps engineers are able to store virtual machine images in a central location.
- C. Open source registry server projects enable organizations to modify them as necessary.
- D. Public image registries lack enterprise support.

Answer: A

Explanation:



VMware created Harbor in 2014. Harbor was shared with the community through an open-source license in 2016 and donated to the Cloud Native Computing Foundation (CNCF) in 2018.

Harbor is integrated into VMware products: vSphere Integrated Containers, Tanzu Kubernetes Grid Integrated Edition, and vSphere with Tanzu. The embedded Harbor for vSphere with Tanzu includes the following features:

- Identity integration and role-based access control

- Graphical user interface
- Auditing of operations
- Management with labels

Question No: 42

The network topology for a Supervisor Cluster deployed using the vSphere networking stack, and a HAProxy load balancer is being planned. In addition to the control plane management IP range and services P range, how many non-overlapping P address ranges are needed?

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

Answer: B

Explanation:

A dedicated IP range for virtual IPs. The HAProxy VM must be the only owner of this virtual IP range.

The range must not overlap with any IP range assigned to any Workload Network owned by any Supervisor Cluster.

Question No: 43

Where is a storage policy applied to enable Persistent Volumes?

- A. Namespace
- B. Datastore
- C. Virtual Machine
- D. Cluster

Answer: A

Explanation:

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.

Developers can list the available storage classes in their namespace by running the `kubectl describe ns <namespace-name>` command.

Question No: 44

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: 45

Which command displays the storage limits that have been set together with the amount of resources consumed?

- A. `kubect1 get resourcequotas`
- B. `kubect1 config get-resourcequotas limits`
- C. `kubect1 list resourcequotas`
- D. `kubect1 describe resourcequotas`

Answer: A

Explanation:

Create the ResourceQuota: `kubectl apply -f https://k8s.io/examples/admin/resource/quota-mem-cpu.yaml --namespace=quotamem- cpu-example`

View detailed information about the ResourceQuota:

```
kubectl get resourcequota mem-cpu-demo --namespace=quota-mem-cpu-example --output=yaml
```

Question No: 46

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: 47

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

Explanation:

Question No: 48

A developer is trying to deploy a Kubernetes Application into a namespace within a Supervisor Cluster. The deployment must utilize the latest assets that have been pushed into the Registry Service.

What should the developer add to the YAML file to ensure that the deployment is successful?

- A. image: /<namespace>/<image name>:latest
- B. template: <image registry url>/<namespace name>/<image name> : latest
- C. image: <image registry url>/<namespace name>/<image name>:latest
- D. template: /<namespace name>/<image name>:latest

Answer: C

Explanation:

Create an example pod spec with the details about the private registry. apiVersion: v1 kind: Pod metadata: name: <workload-name> namespace: <kubernetes-namespace> spec: containers:

- name: private-reg-container image: <Registry-IP-Address>/<vsphere-namespace>/<image-name>:<version> imagePullSecrets:
  - name: <registry-secret-name>

Replace <workload-name> with the name of the pod workload.

Replace <kubernetes-namespace> with the Kubernetes namespace in the cluster where the pod will be created. This must be the same Kubernetes namespace where the Registry Service image pull secret is stored in the Tanzu Kubernetes cluster (such as the default namespace).

Replace <Registry-IP-Address> with the IP address for the embedded Harbor Registry instance running on the Supervisor Cluster.

Replace <vsphere-namespace> with the vSphere Namespace where the target Tanzu Kubernetes is provisioned.

Replace <image-name> with an image name of your choice.

Replace <version> with an appropriate version of the image, such as "latest".

Replace <registry-secret-name> with the name of the Registry Service image pull secret that you created previously.

Question No: 49

Which requirement is valid for vSphere with Tanzu on vSphere Distributed Switch Network?

- A. Workload networks that are routable to the primary workload network
- B. HAProxy Virtual Server IP range that is allocated to NSX-T edge router external interface
- C. Network Interface Cards with Single Root IO Visualization Support (SR-IOV)
- D. HAProxy Frontend interface that has a common subnet and bridged interface to workload networks

Answer: B

Explanation:

Question No: 50

Which open-source project extends the Docker registry source code to provide an enterprise-class registry server?

- A. Namespace
- B. Manifest
- C. Harbor
- D. Github

Answer: C

Explanation:

VMware Harbor Registry

VMware Harbor Registry is an enterprise-class registry server that stores and distributes container images. Harbor allows you to store and manage images for use with VMware Tanzu Kubernetes Grid Integrated Edition (TKGI).

Overview

Harbor extends the open source Docker Distribution by adding the functionalities usually required by an enterprise, such as security, identity, and management. As an enterprise private registry, Harbor offers enhanced performance and security. Deploying a registry alongside the TKGI environment improves image management efficiency.

Question No: 51

A development team has deployed a Tanzu Kubernetes cluster and would like to verify the version of Kubernetes that is running. Which command will show this information?

- A. `kubectl describe tkc dev-cluster`
- B. `kubectl explain tkg dev-cluster`
- C. `kubectl get version`
- D. `kubectl get vm dev-cluster`

Answer: C

Explanation:

Print the client and server version information.

Synopsis

Print the client and server version information. `kubectl version`

Question No: 52

Which object provides user access to applications running on vSphere with Tanzu?

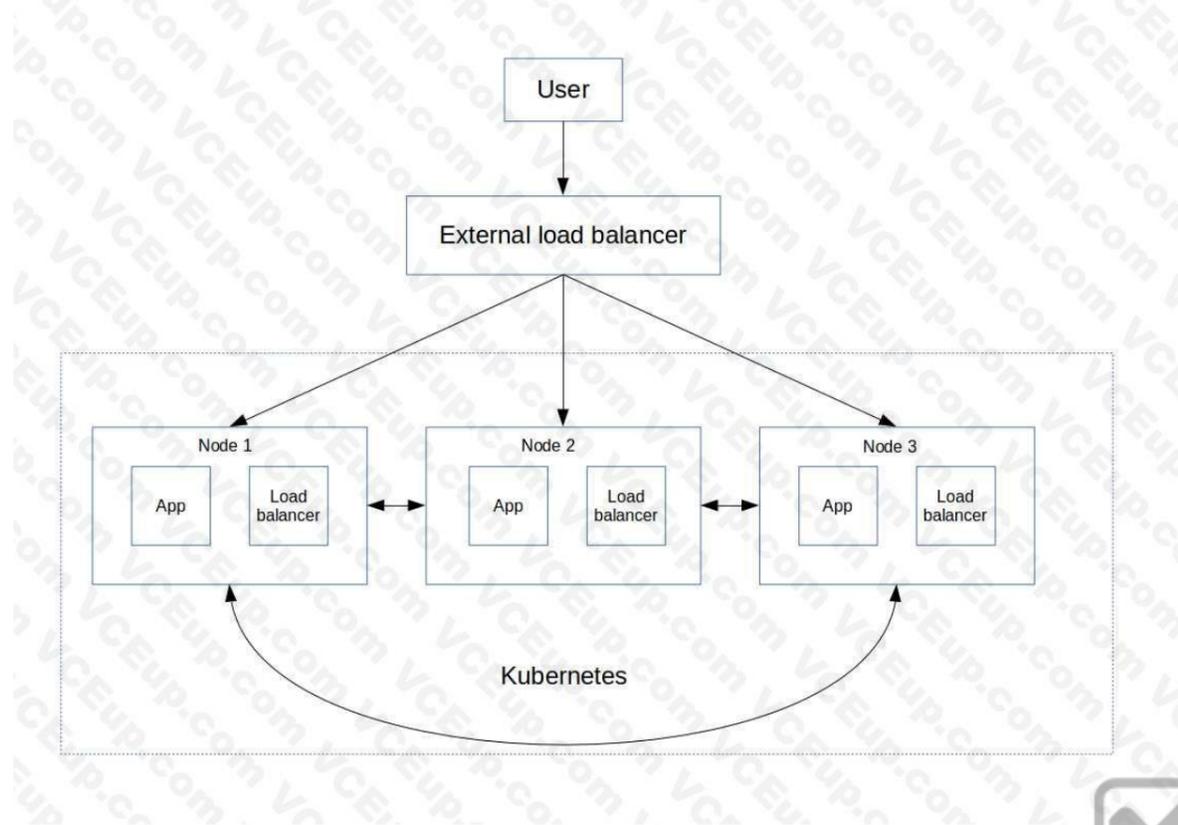
- A. External load balancer
- B. vSphere Distributed Switch
- C. Round-robin DNS
- D. Internal load balancer

Answer: A

Explanation:



External HTTP(S) Load Balancing is a proxy-based Layer 7 load balancer that enables you to run and scale your services behind a single external IP address.



Question No: 53

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

Question No: 54

Which process should be used to upgrade the vSphere with Tanzu Supervisor Cluster?

- A. Use the vSphere Client, navigate to Workload Management, and apply updates.
- B. Use kubectl, and apply an update manifest specification to the Supervisor Cluster.
- C. Use the vSphere Client, navigate to vSphere lifecycle Manager, and apply updates
- D. Allow vSphere with Tanzu Supervisor Cluster to upgrade automatically when new versions are available.

Answer: A

Explanation:

From the vSphere Client menu, select Workload Management.

Select the Updates tab.

Select the Available Version that you want to update to.

For example, select the version v1.17.4-vsc0.0.2-16293900.

Select the Supervisor Cluster to apply the update to.

To initiate the update, click Apply Updates.

Use the Recent Tasks pane to monitor the status of the update.

Question No: 55

How can you remove unreferenced container images from a project in an embedded Registry Service?

- A. Delete images in Content Library.
- B. Use kubectl to delete the images.
- C. Delete the namespace using the vSphere Client.
- D. Purge a namespace using the vSphere Client.



Answer: A

Explanation:

Deleting Artifact:

When an artifact is not referenced by any OCI index, you can delete the artifact freely which will delete its manifest and all associated tags.

When an artifact is referenced by an OCI index, you cannot delete it. In order to delete this artifact, you must first delete all OCI indexes referencing this artifact first, remembering that an artifact can be referenced by multiple parents artifacts pushed onto Harbor by different users. So when deleting an OCI index holding 9 children artifacts not referenced by any other index and 1 child artifact referenced by another index, only 9 out of 10 children artifacts will be deleted.

To delete any artifact in the Harbor interface, click on the artifact and select 'Delete' and confirm.

Not Purge:

As a vSphere administrator, you can purge the images for a project in the private image registry by request from DevOps engineers. Purging images from the private image registry deletes all references to the images made by pods, but it does not remove the images from the image registry.

Question No: 56

What is the minimum number of virtual distributed portgroups that must be configured on the vSphere Distributed Switch before enabling Workload Management using the vSphere networking stack and a HAProxy load balancer?

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

Answer: A

Explanation:

Question No: 57

Which three elements should be configured by a vSphere administrator after creating vSphere Namespace? (Choose three.)

- A. Permissions
- B. Capacity and Usage limits
- C. License
- D. Namespace name
- E. Storage Policy
- F. NSX Segment

Answer: ABE

Explanation:

Creating a Namespace

A vSphere administrator configures permissions and storage before a namespace can be used:

- Assign edit or view permissions to users. Users must be present in a configured single sign-on (SSO) identity source.
- Must assign a VM storage policy to the namespace.
- Can define resource limits (optional).
- Must add a content library to enable the Tanzu Kubernetes Grid Service.

Question No: 58

The application development team is pushing a Kubernetes application into production. It consists of an application server and a database. The team wants to ensure that only the production application server can access the production database.

Can the development team meet this requirement using Kubernetes Network Policy?

- A. Yes, by using kubectl to create a Network Policy that only allows pods on the same network segment to talk to each other.
- B. Yes, by logging in to NSX Manager and creating a firewall rule to only allow the production application server pod to talk to the database
- C. Yes, by using kubectl to create a policy that disables pod to pod communication in the Namespace
- D. No, Kubernetes Network Policy does not support this action.

Answer: A



Explanation:

If you want to control traffic flow at the IP address or port level (OSI layer 3 or 4), then you might consider using Kubernetes NetworkPolicies for particular applications in your cluster.

NetworkPolicies are an application-centric construct which allow you to specify how a pod is allowed to communicate with various network "entities" (we use the word "entity" here to avoid overloading the more common terms such as "endpoints" and "services", which have specific Kubernetes connotations) over the network. NetworkPolicies apply to a connection with a pod on one or both ends, and are not relevant to other connections.

Question No: 59

Which type of service is created by default when publishing a Kubernetes service?

- A. Cluster IP
- B. Node Port
- C. LoadBalancer
- D. ExternalName

Answer: A

Explanation:

For some parts of your application (for example, frontends) you may want to expose a Service onto an external IP address, that's outside of your cluster.

Kubernetes ServiceTypes allow you to specify what kind of Service you want. The default is ClusterIP.

Question No: 60

Which kubectl command should be used to change the active vSphere namespace to namespace-01?

- A. `kubectl config use-context namespace-01`
- B. `kubectl describe ns namespace-01`
- C. `kubectl get ns namespace-01`
- D. `kubectl config change-context namespace-01`

Answer: A

Explanation:

A context element in a kubeconfig file is used to group access parameters under a convenient name.

Each context has three parameters: cluster, namespace, and user. By default, the kubectl commandline tool uses parameters from the current context to communicate with the cluster.

To choose the current context: `kubectl config use-context ctx001`

Question No: 61

Which two items must be provided before a vSphere with Tanzu Supervisor Namespace can be created? (Choose two.)

- A. vSphere with Tanzu Enabled Cluster
- B. DNS-compliant Name
- C. Permissions
- D. Storage Policy

E. Resource Limits

Answer: AD

Explanation:

Prerequisites

Configure a cluster with vSphere with Tanzu.

Create users or groups for all DevOps engineers who will access the namespace.

Create storage policies for persistent storage. Storage policies can define different types and classes of storage, for example, gold, silver, and bronze.

Create VM classes and content libraries for stand-alone VMs.

Create a content library for Tanzu Kubernetes releases for use with Tanzu Kubernetes clusters.

See [Creating and Managing Content Libraries for Tanzu Kubernetes releases](#).

Required privileges:

Namespaces.Modify cluster-wide configuration

Namespaces.Modify namespace configuration

Question No: 62

Which two considerations needs to be made when deciding on a virtual machine class type during the process of creating a Tanzu Kubernetes cluster? (Choose two )

A. Whether the resources provided by the virtual machine class type should be reserved on the host

B. The configuration parameters which need to be edited in the cluster

C. The amount of CPU, memory, and storage the virtual machine should have

D. Connectivity between the Tanzu Kubernetes cluster and the Subscribed Content Library

E. The storage classes which need to be made available to the cluster

Answer: AC

Explanation:



Class	CPU	Memory (GB)	Storage (GB)	Reserved CPU and Memory
guaranteed-8xlarge	32	128	16	Yes
best-effort-8xlarge	32	128	16	No
guaranteed-4xlarge	16	128	16	Yes
best-effort-4xlarge	16	128	16	No
guaranteed-2xlarge	8	64	16	Yes
best-effort-2xlarge	8	64	16	No
guaranteed-xlarge	4	32	16	Yes
best-effort-xlarge	4	32	16	No
guaranteed-large	4	16	16	Yes
best-effort-large	4	16	16	No
guaranteed-medium	2	8	16	Yes
best-effort-medium	2	8	16	No
guaranteed-small	2	4	16	Yes
best-effort-small	2	4	16	No
guaranteed-xsmall	2	2	16	Yes
best-effort-xsmall	2	2	16	No

A virtual machine class is a request for resource reservations for processing power on the virtual machine (VM), including CPU and memory (RAM). For example, the VM class type named "guaranteed-large" reserves 4 CPU and 16 GB RAM. See Default Virtual Machine Classes for a list of default VM classes and their corresponding CPU and RAM reservations.

The VM disk size is set by the OVA template, not the VM class definition. For Tanzu Kubernetes releases, the disk size is 16GB. See About Tanzu Kubernetes release Distributions.

There are two reservation types for VM classes: guaranteed and best effort. The guaranteed class fully reserves its configured resources. This means that for a given cluster the spec.policies.resources.requests matches the spec.hardware settings. The best effort class allows resources to be overcommitted. For production workloads it is recommended that you use the guaranteed VM class type.

Question No: 63

What is true of a Tanzu Kubernetes Cluster?

- A. It is a Kubernetes cluster deployed by developers using a YAML specification file.
- B. It use resources from hosts across vSphere clusters to form a Kubernetes cluster on vSphere.
- C. It enables vSphere High Availability and Distributed Resource Scheduler.
- D. It removes the Kubernetes API for use by DevOps teams.

Answer: B

Explanation:

Question No: 64

Which container network interface (CNI) is supported with Tanzu Kubernetes clusters created by the Tanzu Kubernetes Grid Service? (Choose two )

- A. NSX-T

B. WeaveNet

C. Antrea

D. Cillium

Answer: C

Explanation:

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