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2V0-71.21

Professional VMware Application Modernization

Version 1.0

Exam A

QUESTION 1

Which is the correct option to forward logs from Tanzu Kubernetes Grid clusters to Elastic, Kafka, Splunk or an HTTP endpoint?

A. No action is required. Tanzu Kubernetes Grid automatically forwards the logfiles to syslog.
B. Use the kubectl get logs command to forward the logs
C. Deploy the fluent bit plugin to vRealize Log Insight
D. Deploy Fluent Bit to forward the logs

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-08DE295D-0327-4FED-804C-FC35EBFBE254.html

Deploy and Manage the TKG Extension for Fluent Bit Logging

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📅 Updated on 09/20/2021

Fluent Bit is a fast, lightweight log processor and forwarder that lets you collect application data and logs from different sources, unify them, and send them to multiple destinations. Deploy the TKG Extension for Fluent Bit to collect and forward Tanzu Kubernetes cluster logs to your destination of choice.

Extension Prerequisites

This topic describes how to deploy the TKG Extension v1.3.1 for Fluent Bit. Adhere to the following requirements before deploying the extension.

QUESTION 2 Refer
to the exhibit.

In the following StorageClass manifest, which field is used to specify the Volume Plugin driver used for underlying storage array?

```
apiVersion: storage.k8s.io/v1
kind: StorageClass
metadata:
  name: standard
provisioner: kubernetes.io/aws-ebs
parameters:
  type: gp2
reclaimPolicy: Retain
allowVolumeExpansion: true
mountOptions:
  - debug
volumeBindingMode: Immediate
```

A. type
B. name
C. parameters
D. provisioner

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://support.purestorage.com/Solutions/VMware_Platform_Guide/User_Guides_for_VMware_Solutions/VMware_Tanzu_User_Guide/Tanzu_User_Guide%3A__vVols_Usage

VMware Tanzu Overview and Prerequisites for Usage with Pure Storage

Using VMware vVols and VMFS within the Tanzu ecosystem combines VMware's premier technologies in powerful and important ways. While a key benefit of containers themselves is that they are efficient and can run on pretty much any infrastructure anywhere - a core requirement for them to be useful is the ability to generate, retain and re-use persistent application data on individual volumes. That requirement is what makes vVols in particular a perfect storage option to use with Tanzu. As a single data vVol maps to a persistent volume (PV) within Tanzu, devops users and vSphere administrators now have a simple and granular storage choice for matching persistent data to its corresponding Kubernetes cluster. This KB article will step through some of the core storage concepts with Tanzu, and show how they map and are used against the Pure Storage FlashArray.

QUESTION 3 Which option of Tanzu Mission Control is used to manage namespaces within and across clusters?

A. Workspaces
B. Workhome
C. Workloads
D. Workgroup

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts.pdf (6)

QUESTION 4 Which step must be taken to enable Kubernetes auditing on a Tanzu
Kubernetes cluster?

A. Set the `ENABLE_AUDIT_LOGGING` variable to 'true' before deploying the cluster

B. Run `systemctl start auditd && systemctl enable auditd` on master node

C. Audit is enabled by default on every Tanzu cluster

D. Edit /etc/kubernetes/audit-policy.yaml and set `ENABLE_AUDIT` variable to '1' on master node

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.3/vmware-tanzu-kubernetes-grid-13/GUID-troubleshooting-tkg-audit-logging.html#:~:text=To%20enable%20Kubernetes%20auditing%20on,on%20the%20control%20plane%20node

Overview

In Tanzu Kubernetes Grid, you can access the following audit logs:

- Audit logs from the Kubernetes API server. See Kubernetes Audit Logs below.

- System audit logs for each node in a cluster, collected using `auditd`. See System Audit Logs for Nodes below.

Kubernetes Audit Logs

Kubernetes audit logs record requests to the Kubernetes API server. To enable Kubernetes auditing on a management or Tanzu Kubernetes cluster, set the `ENABLE_AUDIT_LOGGING` variable to `true` before you deploy the cluster.

To access these logs in Tanzu Kubernetes Grid, navigate to `/var/log/kubernetes/audit.log` on the control plane node. If you deploy Fluent Bit on the cluster, it will forward the logs to your log destination. For instructions, see Implementing Log Forwarding with Fluent Bit.

QUESTION 5 What command would an administrator use to upgrade the Tanzu
Management Cluster?

A. `apt-get install -y kubeadm`

B. `tkg management-upgrade`

C. `tanzu-upgrade-mgt`

D. `tkg upgrade management-cluster`

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://vmtechie.blog/2020/06/17/upgrade-tanzu-kubernetes-grid/

Upgrade Tanzu Kubernetes Grid

Tanzu Kubernetes Grid make it very simple to upgrade Kubernetes clusters , without impacting availability of control plane and also ensures rolling update for worker nodes.we just need to run two commands to upgrade Tanzu Kubernetes Grid: "tkg upgrade management-cluster" and tkg upgrade cluster CLI commands to upgrade clusters that we deployed with Tanzu Kubernetes Grid 1.0.0. In this blog post we will upgrade Tanzu Kubernetes Grid from version 1.0.0 to 1.1.0

Pre-Requisite

In this post we are going to upgrade TKG from version 1.0.0 to version 1.1.0 and to start upgrading we need to download the new versions of "TKG" client cli , Base OS Image Template and API server load balancer.

QUESTION 6 What does an administrator need to install to attach a Kubernetes cluster to Tanzu Mission Control (TMC)?

A. TMC service
B. The agent is already installed
C. Cluster agent extensions
D. TMC agent pack

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-using/GUID-6DF2CE3E-DD07-499B-BC5E-6B3B2E02A070.html

Attach a Cluster

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Updated on 09/20/2021

Attach an existing cluster to your organization using the Tanzu Mission Control console.

To attach a cluster you run a set of extensions on the cluster and associate it with a cluster group in Tanzu Mission Control.

Prerequisites

You use both the Tanzu Mission Control console and the Kubernetes CLI to attach a cluster.

- Open a browser and log in to the Tanzu Mission Control console.

QUESTION 7 Under Menu, which section to enable Tanzu Kubernetes Cluster in VMware vSphere for Tanzu on vSphere Client?

A. VMs and Templates
B. Hosts and Cluster
C. Workload Management
D. Content Libraries

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/rn/vsphere-esxi-vcenter-server-7-vsphere-with-tanzu-release-notes.html

QUESTION 8 Choose two supported functionalities when enabling Workload Management with a VMware vSphere Distributed Switch? (Choose two.)

A. NSX Advanced Load Balancer
B. NSX Load Balancer
C. Tanzu Kubernetes clusters
D. Embedded Harbor Registry
E. vSphere Pods

Correct Answer: CD
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-EE236215-DA4D-4579-8BEB-A693D1882C77.html

Prerequisites for Configuring vSphere with Tanzu on a Cluster

📅 Updated on 09/14/2021

Check out the prerequisites for enabling vSphere with Tanzu in your vSphere environment. To run container-based workloads natively on vSphere, as a vSphere administrator you enable **Workload Management** on a vSphere cluster. The result is a Kubernetes management cluster known as a Supervisor Cluster where you run vSphere Pods, provision Tanzu Kubernetes clusters, and VMs.

Create and Configure a vSphere Cluster

A vSphere cluster is a collection of ESXi hosts managed by a vCenter Server system. The Supervisor Cluster runs on a vSphere cluster. Create a vSphere cluster that meets the

QUESTION 9 What is the advantage of connecting the Tanzu Kubernetes Grid (TKG) CLI to a vSphere with Tanzu Supervisor Cluster?

A. Tanzu Kubernetes clusters can be managed with vCenter Server Graphical User Interface console.
B. Kubernetes objects can be created via vCenter Server VAMI interface.
C. Tanzu Kubernetes clusters can be managed with ESXi Host Client.
D. Tanzu Kubernetes clusters can be deployed to vSphere with Tanzu and manage their lifecycle directly from the TKG CLI.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-tanzu-k8s-clusters-connect-vsphere7.html

You can connect the Tanzu Kubernetes Grid CLI to a vSphere with Tanzu Supervisor Cluster that is running in a vSphere 7 instance. In this way, you can deploy Tanzu Kubernetes clusters to vSphere with Tanzu and manage their lifecycle directly from the Tanzu Kubernetes Grid CLI.

vSphere with Tanzu provides a vSphere Plugin for `kubectl`. The vSphere Plugin for `kubectl` extends the standard `kubectl` commands so that you can connect to the Supervisor Cluster from `kubectl` by using vCenter Single Sign-On credentials. Once you have installed the vSphere Plugin for `kubectl`, you can connect the Tanzu Kubernetes Grid CLI to the Supervisor Cluster. Then, you can use the Tanzu Kubernetes Grid CLI to deploy and manage Tanzu Kubernetes clusters running in vSphere.

NOTE: On VMware Cloud on AWS and Azure VMware Solution, you cannot create a Supervisor Cluster, and need to deploy a management cluster to run `tkg` commands.

QUESTION 10 What is the default authentication implemented in Tanzu Kubernetes Grid?

A. Keycloak
B. Vault
C. Dex & Gangway
D. kube-oidc-proxy

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://www.vaultproject.io/docs/auth/kubernetes

Via the CLI

The default path is `/kubernetes`. If this auth method was enabled at a different path, specify `-path=/my-path` in the CLI.

```
$ vault write auth/kubernetes/login role=demo jwt=...                    Copy
```

Via the API

The default endpoint is `auth/kubernetes/login`. If this auth method was enabled at a different path, use that value instead of `kubernetes`.

QUESTION 11
After successfully configuring vSphere Container Storage Interface (CSI), what is the path an administrator can follow to view the status of the container volumes?

A. Describe the StorafeClass via `kubectl`.

B. vSAN Data Store in ESXi Host Client.

C. Get the status of the pods vis `kubectl`.

D. Container volumes in vSphere Client.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.3/vmware-tanzu-kubernetes-grid-13/GUID-tanzu-k8s-clusters-storage.html

This topic explains how to use dynamic storage in Tanzu Kubernetes (workload) clusters in Tanzu Kubernetes Grid.

Overview: PersistentVolume, PersistentVolumeClaim, and StorageClass

Within a Kubernetes cluster, `PersistentVolume` (PV) objects provide shared storage for cluster pods that is unaffected by pod lifecycles. Storage is provisioned to the PV through a `PersistentVolumeClaim` (PVC) object, which defines how much and how the pod accesses the underlying storage. For more information, see Persistent Volumes in the Kubernetes documentation.

Cluster administrators can define `StorageClass` objects that let cluster users dynamically create PVC and PV objects with different storage types and rules. Tanzu Kubernetes Grid also provides default `StorageClass` objects that let users provision persistent storage in a turnkey environment.

QUESTION 12 What are the infrastructure services prerequisites to enable Tanzu in vSphere? (Choose all that apply.)

A. DHCP
B. Active directory
C. Firewall
D. DNS
E. NTP

Correct Answer: ADE
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-B1388E77-2EEC-41E2-8681-5AE549D50C77.html

Configuration Limits for vSphere with Tanzu Clusters

VMware provides configuration limits in the VMware Configuration Maximums tool.

For configuration limits specific to vSphere with Tanzu, including Supervisor Clusters and Tanzu Kubernetes clusters, select **vSphere > vSphere 7.0 > vSphere with Kubernetes > VMware Tanzu Kubernetes Grid Service for vSphere** and click **View Limits**, or follow this link.

Requirements for a Management, Edge, and Workload Domain Cluster

You can deploy vSphere with Tanzu with combined management, Edge, and workload management functions on a single vSphere cluster.

QUESTION 13 A Tanzu Mission Control administrator would like to enforce the following container controls:

Require Digest.
Name-Tag Allowlist.

To which type of policies do these controls belong to?

A. Security
B. Registry
C. Access
D. Network

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-using.pdf (104)

QUESTION 14 A customer needs to use Kubernetes and wants to use networking solution, Antrea.

Which product from Tanzu portfolio should the customer use?

A. Tanzu Application Catalog
B. Tanzu Kubernetes Grid
C. Tanzu Mission Control
D. Tanzu Observability

Correct Answer: B
Section: (none)
Explanation

Tanzu Kubernetes Grid

Tanzu Kubernetes Grid, otherwise known as TKG, is the underlying Kuberenetes distribution for all of VMware's Kuberenete based products. It's part of vSphere with Kubernetes. It's part of TKGI (what was once PKS). But it's not just a distribution…it's also a standalone lifecycle manager that heavily utilizes **Cluster API** to manage virtual machines on which Kubernetes runs.

I'm not going to get into how TKG works, other than to say one of the first things you do with TKG is to deploy a management cluster. That cluster is then used to manage the life cycle of many other k8s "workload" clusters.

Here's all the CRDs that are part of the management cluster.

```
$ k get crds | grep "machine/|vsphere\|cluster"
clusterinformations.crd.projectcalico.org       2020-04-21T19:03:46Z
clusterissuers.cert-manager.io                  2020-04-21T19:03:48Z
```

QUESTION 15 What is the object in Kubernetes used to grant permissions to a cluster wide resource?

A. ClusterRoleAccess
B. RoleBinding
C. ClusterRoleBinding
D. RoleReference

Correct Answer: C
Section: (none)
Explanation

About Kubernetes Pod Security Policies

Kubernetes pod security policies (PSPs) are cluster-level resources that control the security of pods. Using PSPs gives you control over the types of pods that can be deployed and the types of accounts that can deploy them.

A PodSecurityPolicy resource defines a set of conditions that a pod must satisfy to be deployable. If the conditions are not met, the pod cannot be deployed. A single PodSecurityPolicy must validate a pod in its entirety. A pod cannot have some of its rules in one policy and some in another.

There are various ways to implement the use of pod security policies in Kubernetes. The typical approach is by using role-based access control (RBAC) objects. ClusterRole and ClusterRoleBinding apply cluster-wide; Role and RoleBinding apply to a specific namespace. If a RoleBinding is used, it only lets pods run in the same namespace as the binding.

QUESTION 16 What are two ClusterAPI providers being used in Tanzu Kubernetes Grid? (Choose two.)

A. CAPZ
B. CAPA
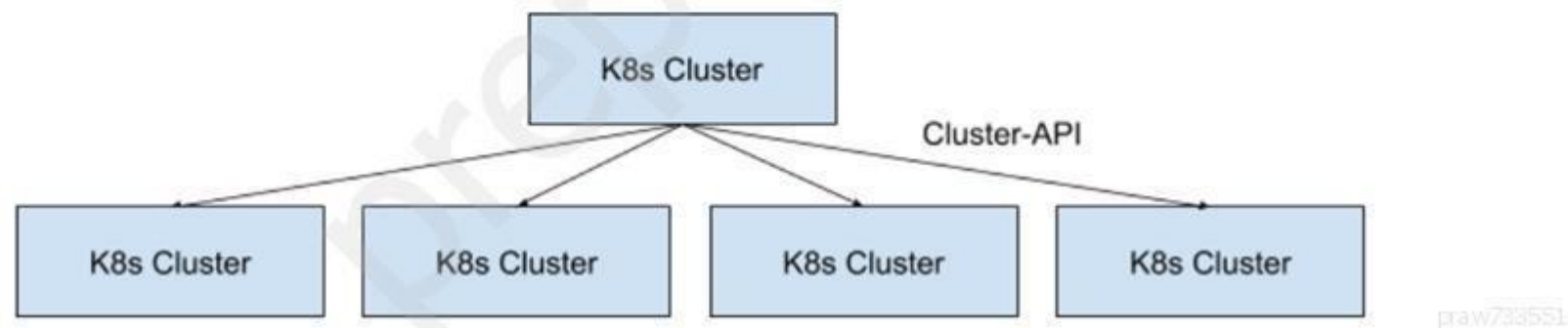C. CAP
D. CAPW
E. CAPV

Correct Answer: AB
Section: (none)
Explanation

Explanation/Reference:
Reference: https://tanzu.vmware.com/content/blog/taking-kubernetes-to-the-people-how-cluster-api-promotes-self-service-infrastructure

Two **key goals of Cluster API** are to manage the full lifecycle of a Kubernetes cluster, including scaling up and scaling down the cluster, and to give infrastructure providers a common framework to build against so that everyone can have a common workflow irrespective of where they intend to consume CPUs, memory, or network resources. That's easier said than done, of course, so here comes the first thing to get your head around—with Cluster API, Kubernetes clusters are provisioned, scaled, and de-provisioned by an external Kubernetes cluster. It is, in effect, turtles all the way down.

QUESTION 17 Which two options are supported use of Content Library in VMware vSphere with Tanzu? (Choose two.)

A. Subscribed Content Library requires internet connectivity
B. Local Content Library for Air-Gapped Deployment
C. Subscribed Content Library for Air-Gapped Deployment
D. Download manually via Content Library
E. Local Content Library requires internet connectivity

Correct Answer: BD
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-E8C37D8A-E261-44F0-9947-45ABAB526CF3.html

QUESTION 18 How are Tanzu Kubernetes clusters upgraded?

A. Deploy a new cluster with upgraded Kubernetes release
B. Rolling upgrades
C. Clusters are only upgraded offline
D. In-place upgrade for each node

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-DF2B3886-4BE0-4E88-B549-DC9C1C653FDB.html

Tanzu Kubernetes Cluster Update Requirements

Read the release notes before you perform a Tanzu Kubernetes cluster update.

To update Tanzu Kubernetes clusters, first perform a vSphere Namespaces update. When you perform a vSphere Namespace update, all Tanzu Kubernetes clusters must be in a running state. See Update the Supervisor Cluster by Performing a vSphere Namespaces Update.

The Kubernetes software version is a string in the cluster manifest that is semantic version notation. For example, if the version is `1.18.5`, "1" is the major version, "18" is the minor version, and "5" is the patch version.

When upgrading the Kubernetes version for an existing Tanzu Kubernetes cluster, observe the following requirements:

QUESTION 19 Which role is required to enable data protection in Tanzu Mission Control?

A. cluster.admin
B. clusters.admin
C. cluster.edit
D. cluster.manage

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-using/GUID-5EF38D8D-2085-4924-B78B-D49C63064F31.html

QUESTION 20 Select the tkg cli command below that provides valid syntax for scaling a Tanzu Kubernetes Grid cluster:

A. `tkg scale cluster_name --cp-machine-count 5 --node-count 10`

B. `tkg scale cluster cluster_name --controlplane-machine-count 5 --worker-machine-count 10`

C. `tkg scale cluster_name --controlplane-machine-count 5 --worker-machine-count 10`

D. `tkg scale cluster cluster_name --cp-machine-count 5 --node-count 10`

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.0/vmware-tanzu-kubernetes-grid-10/GUID-tkg-cli-reference.html

Command	Options	Documented In
tkg *		
	--config	Common Tanzu Kubernetes Grid Options Deploy the Management Cluster to Amazon EC2 with the CLI Deploy the Management Cluster to Amazon EC2 with the Installer Interface Deploy the Management Cluster to vSphere with the CLI Deploy the Management Cluster to vSphere with the Installer Interface
	--kubeconfig --log_file --quiet	Common Tanzu Kubernetes Grid Options

QUESTION 21 What is a standard solution for a Kubernetes administrator to implement pod security?

A. iptables
B. Add check for validating YAML
C. OPA
D. Use trusted corporate repository

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://kubernetes.io/docs/concepts/policy/pod-security-policy/

QUESTION 22 What are the pre-requisites for installing the Harbor registry in Tanzu Kubernetes Grid (TKG)?

A. Install Harbor helm from vCenter.
B. Deploy a management cluster, download and install the TKG extensions and Carvel tools.
C. Deploy a management cluster, launch the Harbor installation wizard.
D. Deploy a management cluster and install Tanzu Kubernetes Grid extensions.

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-extensions-harbor-registry.html

The procedures in this topic all apply to vSphere, Amazon EC2, and Azure deployments.

Using the Harbor Shared Service in Internet-Restricted Environments

Another use-case for deploying Harbor as a shared service is for Tanzu Kubernetes Grid deployments in Internet-restricted environments. For more information, see Using the Harbor Shared Service in Internet-Restricted Environments.

Prerequisites

- You have deployed a management cluster on vSphere, Amazon EC2, or Azure, in either an Internet-connected or Internet-restricted environment.

QUESTION 23
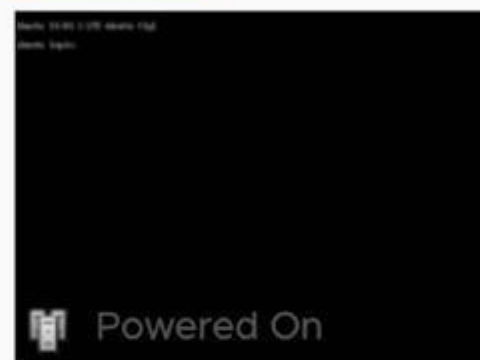On VMware vSphere with Tanzu, which attribute identifies the etcd Leader node using the vSphere Client?

vSphere Client

Menu ∨   🔍 Search in all environments

🔲 **SupervisorControlPlaneVM (1)** | ▶ ⬛ 🖥 🗎 🔾 | ACTIONS ∨

Summary   Monitor   Configure   Permissions   Datastores   Networks   Snapshots

∨ 🔲 vcsa-01a.corp.local
  ∨ 🔳 RegionA01
    ∨ 🔳 RegionA01-COMP01
      🔲 esx-01a.corp.local
      🔲 esx-02a.corp.local
      🔲 esx-03a.corp.local
      🔲 esx-04a.corp.local
    ∨ 🔵 Namespaces
      🔳 demo-app-01
      ∨ 🔵 tkg-cluster-01
        🔲 tkg-cluster-01-control-plane...
        🔲 tkg-cluster-01-workers-9cjf...
        🔲 tkg-cluster-01-workers-9cjf...
        🔲 tkg-cluster-01-workers-9cjf...
      🔲 **SupervisorControlPlaneVM (1)**
      🔲 SupervisorControlPlaneVM (2)
      🔲 SupervisorControlPlaneVM (3)
    🔲 haproxy-v0.18

Guest OS:	Vmware Photon OS (64-bit)
Compatibility:	ESXi 7.0 and later (VM version 17
VMware Tools:	Running, version:11296 (Guest Managed)
	MORE INFO
DNS Name:	4213e353c7b8c12114efff958612413
IP Addresses:	192.168.110.69
	VIEW ALL 4 IP ADDRESSES
Host:	esx-04a.corp.local
Managed By:	vSphere ESX Agent Manager
	DETAILS

📦 Powered On

Launch Web Console
Launch Remote Console

ℹ️

🐧 🖥 📥 🔲

VM Hardware ∨

Related Objects ∧

Cluster	🔳 RegionA01-COMP01
Host	🔲 esx-04a.corp.local
Resource pool	🔵 Namespaces
Networks	vDS-Management

Recent Tasks   Alarms

Task Name	∨	Target	∨	Status	∨	Details	∨	Initiator	∨	Queued For	∨
Fetch Content of a Library Item		ob-16924026-photon-3-kB		✓ Completed				VSPHERE LOCAL		103 ms	
Reconfigure alarm		🔲 vsca-01a.corp.local		✓ Completed				CORP Administrator		4 ms	

A. amount of memory resources
B. number of Networks
C. number of IP addresses
D. amount of compute resources

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:

QUESTION 24 Which two inspections are supported in Tanzu Mission
Control? (Choose two.)

A. Vulnerability Inspection
B. SAST Inspection
C. CIS Benchmark Inspection
D. Security Inspection
E. Conformance Inspection

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts/GUID-1BB98612-A9BF-494C-8446-1DB2E80BF5F9.html

QUESTION 25 Which access policy control is used in Tanzu
Mission Control?

A. vCenter Server access control
B. Attribute-based access control
C. Role-based access control
D. Active Directory access control

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts.pdf (8)

QUESTION 26 Which log file can be used for troubleshooting when there is a problem with Workload Control Plane
(WCP) deployment?

A. `wcpsvc.log`
B. `websso.log`
C. `vpxd.log`
D. `sps.log`

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-F7B30D53-A839-40D9-8D8C-2262AAA5BAD0.html

Solution

1. Establish an SSH connection to the vCenter Server Appliance.

2. Log in as the `root` user.

3. Run the command `shell`.

   You see the following:

   ```
   Shell access is granted to root
   root@localhost [ ~ ]#
   ```

4. Run the following command to tail the log.

   ```
   tail -f /var/log/vmware/wcp/wcpsvc.log
   ```

QUESTION 27
Refer to the exhibit.

A developer deployed nginx with 2 replicas on a new Tanzu Kubernetes Grid cluster, but the deployment did not move to a ready state.

What is the next step to troubleshoot?

A. `kubectl describe pods`
B. `kubectl describe replicasets`
C. `kubectl get pods`
D. `kubectl get errors`

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.hol.vmware.com/HOL-2021/hol-2113-01-sdc_html_en/

QUESTION 28
Refer to the exhibit.

```
File: nginx-service.yaml

1   apiVersion: v1
2   kind: Service
3   metadata:
4     labels:
5       app: nginx
6     name: nginx
7     namespace: default
8   spec:
9     ports:
10    - port: 80
11      protocol: TCP
12      targetPort: 80
13    selector:
14      app: nginx
15 ~  type: ClusterIP
```

Which two options can be modified in order to expose nginx app using Ingress Controller? (Choose two.)

A. Change type to IngressController
B. Change type to LoadBalancer
C. Change type to NodePort
D. Change type to HostPort
E. Change type to AntreaCni

Correct Answer: AD
Section: (none)
Explanation

Explanation/Reference:

QUESTION 29 Which two roles are required to attach clusters in Tanzu Mission
Control? (Choose two.)

A. cluster.attach.admin
B. clustergroup.attach.admin
C. clustergroup.edit
D. clusters.admin
E. cluster.admin

Correct Answer: CE
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-using.pdf

QUESTION 30

How can an administrator collect a support bundle for Tanzu Kubernetes cluster (TKC)?

A. Collect with PowerCLI
B. Use TKC Support Bundler
C. Run command `kubectl collect tkc support-bundle`
D. Download from vCenter Server

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-6390E04F-E511-4DC9-B941-FDD0979F2A2A.html

QUESTION 31 What role is used to run cluster inspection on Tanzu Mission
Control console?

A. Cluster.edit role
B. Credential.admin role
C. Credential.view role
D. Create role

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-using/GUID-DA179B09-DF64-4651-B6E2-4551383BACD8.html

Start a Cluster Inspection

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📅 Updated on 11/15/2019

Intiate an inspection to verify the conformance of a cluster.

Cluster inspections in VMware Tanzu Mission Control are precofigured inspections that allow you to test the conformance of your clusters using Sonobuoy. For more information, see Cluster Inspections in *VMware Tanzu Mission Control Concepts.*

Prerequisites

This procedure assumes that you already have a cluster (either provisioned or attached) that you want to inspect for conformance.

QUESTION 32
An architect is designing the infrastructure for multiple applications and needs to ensure isolation and control over resources and permissions assigned to each application team.

Which is the easiest and least expensive way to satisfy these requirements?

A. Use dedicated Supervisor Cluster per application

B. Use dedicated vSphere Namespace per application
C. Use dedicated vSphere Pod per application
D. Use dedicated Kubernetes Deployments per each application

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The dedicated namspace per application ensure isolation and control over resources and permissions in each application team. Namespace is unique entity that is why it can be used to manage resources independently.

QUESTION 33
An administrator was asked to run a conformance testing on all Kubernetes clusters managed by Tanzu Mission Control.

What are the required steps?

A. Conformance testing can be run on the cluster level, repeat this task for all the clusters
B. Run the conformance testing by selecting a cluster group that all the clusters belong to
C. Run the conformance testing by selecting a workspace group that all the cluster namespaces belong toD. Apply a label to all the clusters and select the label when running the conformance testing

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.hol.vmware.com/HOL-2020/hol-2032-01-cna_html_en/

QUESTION 34 What is the MINIMUM required version of vSphere to install Tanzu
Kubernetes Grid?

A. 6.0 Update 1 B.
6.5 Update 2 C.
6.7 Update 1
D. 6.7 Update 3

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://www.msystechnologies.com/blog/how-to-deploy-tanzu-kubernetes-grid-cluster-on-vmware-vsphere-infrastructure-in-9-steps/

QUESTION 35 Which upgrade method can be used for an 'in-place'
Kubernetes update?

A. Run "kubectl patch" command against a Tanzu Kubernetes cluster
B. Change the VirtualMachineClass on a Tanzu Kubernetes cluster
C. Change the number of control plane nodes
D. Change the StorageClass on a Tanzu Kubernetes cluster

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-DF2B3886-4BE0-4E88-B549-DC9C1C653FDB.html

Tanzu Kubernetes Cluster Update Requirements

Read the release notes before you perform a Tanzu Kubernetes cluster update.

To update Tanzu Kubernetes clusters, first perform a vSphere Namespaces update. When you perform a vSphere Namespace update, all Tanzu Kubernetes clusters must be in a running state. See Update the Supervisor Cluster by Performing a vSphere Namespaces Update.

The Kubernetes software version is a string in the cluster manifest that is semantic version notation. For example, if the version is `1.18.5`, "1" is the major version, "18" is the minor version, and "5" is the patch version.

QUESTION 36 What us the definition of Tanzu Kubernetes Grid Instance?

A. Management cluster and Tanzu Kubernetes clusters
B. Management cluster and Tanzu Operations
C. Management cluster and Tanzu Build Service
D. Management cluster and kubeadm

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.0/vmware-tanzu-kubernetes-grid-10/GUID-tkg-concepts.html

QUESTION 37 Which Tanzu Mission Control role provides the typical service usage for most members in an organization?

A. Service Collaborator
B. Service Member
C. Service OwnerD. Service Admin

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts/GUID-EB9C6D83-1132-444F-8218-F264E43F25BD.html

QUESTION 38 Which storage provider is available in Tanzu Mission Control for Data Protection?

A. Local Storage
B. AWS
C. Google
D. Any S3 compatible Storage
Correct Answer: D

Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts/GUID-C16557BC-EB1B-4414-8E63-28AD92E0CAE5.html

QUESTION 39 Which command is used to upgrade a Tanzu Kubernetes Grid Cluster (TKG) to a different
kubernetes version?

A. `tkg cluster upgrade <cluster_name> --k8s-version <version>`

B. `tkg upgrade cluster <cluster_name> --kubernetes-version <version>`

C. `tkg cluster upgrade <cluster_name> --kubernetes-version <version>`

D. `tkg upgrade cluster <cluster_name> --version <version>`

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-upgrade-tkg-workload-clusters.html

Prerequisites

- You performed the steps in Upgrading Tanzu Kubernetes Grid.

- You performed the steps in Upgrade Management Clusters to upgrade the management cluster that manages the Tanzu Kubernetes clusters that you want to upgrade.

- If you are upgrading clusters that run on vSphere, before you can upgrade clusters to a non-default version of Kubernetes for your version of Tanzu Kubernetes Grid, the appropriate base OS template OVAs must be available in vSphere as VM templates. For information about importing base OVA files into vSphere, see Prepare to Upgrade Clusters on vSphere.

- If you are upgrading clusters that run on Amazon EC2, the Amazon Linux 2 Amazon Machine Images (AMI) that include the supported Kubernetes versions are publicly available to all Amazon EC2 users, in all supported AWS regions. Tanzu Kubernetes Grid automatically uses the appropriate AMI for the Kubernetes version that you specify during upgrade.

QUESTION 40 Which method is supported to change Kubernetes version for Tanzu Kubernetes clusters on VMware
vSphere with Tanzu?

A. Upgrade by incremental Kubernetes version e.g. 1.17 to 1.18

B. Change the major version, e.g. from v1.18 to v2.0

C. Decrease Kubernetes version e.g. 1.18 to 1.17

D. Upgrade by skipping Kubernetes version e.g. 1.16 to 1.18

Correct Answer: A
Section: (none)

Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-DF2B3886-4BE0-4E88-B549-DC9C1C653FDB.html

Tanzu Kubernetes Cluster Update Requirements

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The Kubernetes software version is a string in the cluster manifest that is semantic version notation. For example, if the version is `1.18.5`, "1" is the major version, "18" is the minor version, and "5" is the patch version.

QUESTION 41 Which is the correct statement describing the characteristic of a pod?

A. Pod is the smallest entity managed by Docker.
B. Pod can contain only one container.
C. Containers in a pod start and stop together.
D. Pod is deployed directly on the virtual machine.

Correct Answer: C
Section: (none)
Explanation

Explanation/Reference:
Reference: https://kubernetes.io/docs/concepts/workloads/pods/

QUESTION 42 What is the command to recognize a cluster in a disconnected state to Tanzu Mission Control?

A. tmc cluster configure -n < cluster_name> -k </path/to/kubeconfig>
B. tmc configure cluster -n < cluster_name> -k </path/to/kubeconfig>
C. tmc join cluster -n < cluster_name> -k </path/to/kubeconfig>
D. tmc cluster reattach -n < cluster_name> -k </path/to/kubeconfig>

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Explanation:
The cluster reattach command needs to see the status of tanzu mission control before reattaching a cluster. The probe can show the disconnected state of a cluster in tanzu mission control.

QUESTION 43
To configure a cluster with user authentication in Tanzu Kubernetes Grid (TKG), which options are needed to deploy Dex on a management cluster running on vSphere? (Choose two.)

A. Dex with Local Authentication
B. Dex with Active Directory
C. Dex with OpenLDAP
D. Dex with OIDC
E. Dex with LDAP

Correct Answer: DE
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-extensions-deploy-auth-cluster.html

Procedure

This procedure applies to deploying authentication-enabled Tanzu Kubernetes clusters to management clusters that are running on vSphere, Amazon EC2, or Azure.

1. Make sure that `kubectl` is still set to the context of the management cluster on which you deployed Dex.

```
kubectl config use-context auth-mgmt-cluster-admin@auth-mgmt-cluster
```

2. Set one of the following environment variables, depending on whether your management cluster is running on vSphere, Amazon EC2 or Azure.

On Windows platforms, use the `SET` command instead of `export`.

vSphere:

```
export OIDC_ISSUER_URL=https://<MGMT_CLUSTER_IP>:30167
```

QUESTION 44 What Kubernetes feature would be used to force the scheduler to place instances of the application on different nodes?

A. nodeAffinity/nodeAntiAffinity
B. nodeAuthorization
C. kubectl
D. namespaces

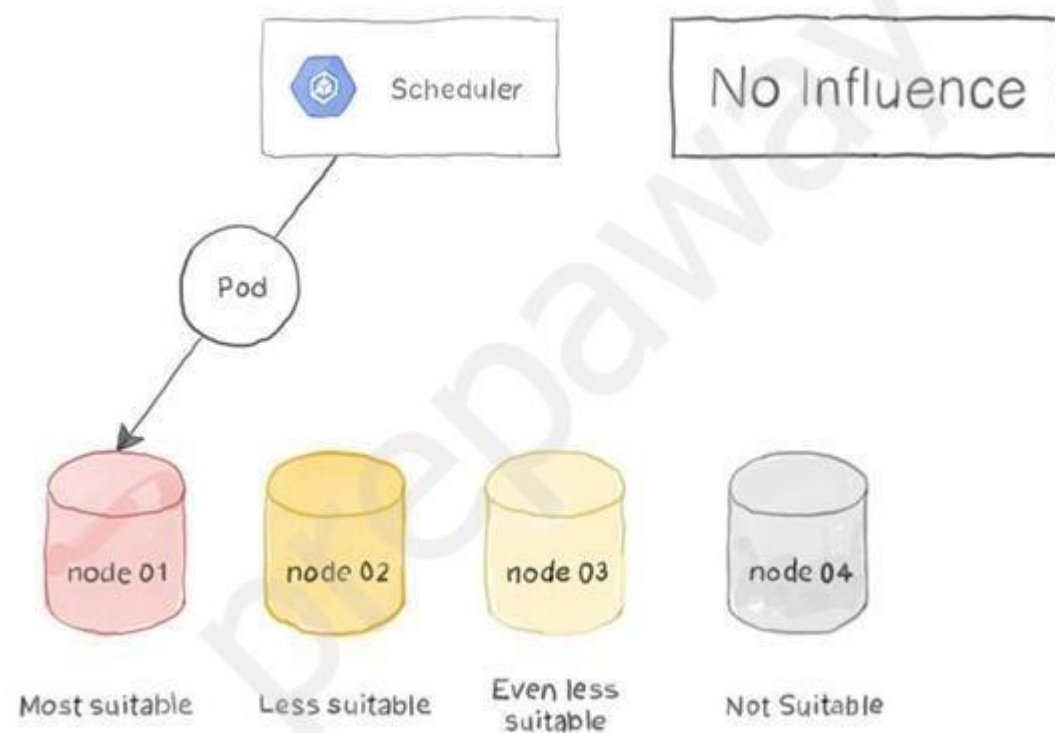**Correct Answer:** A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://www.magalix.com/blog/influencing-kubernetes-scheduler-decisions

Scheduler | No Influence

Pod

node 01 — Most suitable
node 02 — Less suitable
node 03 — Even less suitable
node 04 — Not Suitable

QUESTION 45 How is the Tanzu Kubernetes Grid (TKG) management cluster created?

A. There is no need for a management cluster in Tanzu Kubernetes Grid.
B. The administrator creates the management cluster in vCenter.
C. Download the kubernetes management agent.
D. The TKG CLI creates a temporary bootstrap cluster.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-mgmt-clusters-deploy-management-clusters.html

QUESTION 46 Which tool is required to install extensions in Tanzu Kubernetes Grid clusters?

A. k9s
B. kubectx
C. knative
D. ytt

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.2/vmware-tanzu-kubernetes-grid-12/GUID-extensions-index.html

QUESTION 47
An administrator needs to deploy the infrastructure for three applications that are being developed. It is required to provide different Kubernetes version for each application.

Which approach satisfies these requirements?

A. Create three different pods for each application.
B. Deploy three different Tanzu Kubernetes Grid workload clusters with different Kubernetes versions.
C. Create three different namespaces for each application.
D. Deploy three different management clusters with different Kubernetes versions.

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.3/vmware-tanzu-kubernetes-grid-13/GUID-tanzu-k8s-clusters-k8s-versions.html

QUESTION 48 What kubernetes object can be used to mount and run script inside a POD
after creation?

A. Admission controller
B. Deployment
C. Config map
D. Secret

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vsphere-esxi-vcenter-server-702-vsphere-with-tanzu-guide.pdf

QUESTION 49 What is the period of time to consider DISCONNECTED state for a cluster in Tanzu
Mission Control?

A. 3 minutes
B. 1 minute
C. 2 minutes
D. 5 minutes

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Mission-Control/services/tanzumc-concepts.pdf (18)

QUESTION 50 Which tools are required to be installed on your local machine before installing
TKG extensions?

A. kapp, kbld, ytt
B. ytt, kubens, jq, whoami
C. kbld, kapp, jq
D. ytt, yq, certgen, openssl

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:

Tanzu Kubernetes Grid includes binaries for tools that provide in-cluster and shared services to the clusters running in your Tanzu Kubernetes Grid instance. All of the provided binaries and container images are built and signed by VMware.

You can add functionalities to Tanzu Kubernetes clusters by installing extensions to different cluster locations as follows:

Function	Extension	Location	Procedure
Ingress Control	Contour	Tanzu Kubernetes cluster	Implementing Ingress Control with Contour
Log Forwarding	Fluent Bit	Tanzu Kubernetes	Implementing Log Forwarding

QUESTION 51 Which option provides a configuration blueprint to deploy Tanzu Kubernetes clusters?

A. Tanzu Kubernetes Cluster Spec B. Tanzu Kubernetes Grid Installer
C. Tanzu ClusterAPI Provider
D. Tanzu Kubernetes Cluster Plan

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.4/vmware-tanzu-kubernetes-grid-14/GUID-tkg-concepts.html

QUESTION 52 What is the command to find out the available node base operating system images?

A. kubectl get nodes
B. kubectl cluster-info
C. kubectl get virtualmachineclasses
D. kubectl get virtualmachineimages

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-Tanzu-Kubernetes-Grid/1.1/vmware-tanzu-kubernetes-grid-11/GUID-troubleshooting-tkg-tips.html

QUESTION 53 Which prerequisite must be configured before starting the Tanzu workload management enablement wizard?

A. Content library

B. Tanzu Mission Control
C. Storage policy
D. Tanzu Build Service

Correct Answer: A
Section: (none)
Explanation

Explanation/Reference:
Reference: https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-8D7D292B-43E9-4CB8-9E20-E4039B80BF9B.html

QUESTION 54 Why is the port 6443 required in the boostrap machine to deploy Tanzu Kubernetes Grid on vSphere environment?

A. Kubernetes IP is exposed
B. Kubernetes API is exposed
C. Kubernetes TLS is exposed
D. Kubernetes VPN is exposed

Correct Answer: B
Section: (none)
Explanation

Explanation/Reference:
Reference: https://www.fatalerrors.org/a/step-by-step-install-tanzu-kubernetes-grid.html

QUESTION 55 Which component can intercept requests to the Kubernetes API?

A. Network Policy
B. RBAC Authorization
C. Pod Security Policies
D. Admission Controllers

Correct Answer: D
Section: (none)
Explanation

Explanation/Reference:
Reference: https://kubernetes.io/docs/reference/access-authn-authz/admission-controllers/