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**Exam Code: 5V0-31.22**

**Exam Name: VMware Cloud Foundation Specialist (v2)**



## Exam A

### QUESTION 1

What are the correct steps to grant the DevOps team permissions to a vSphere Namespace in a VMware Cloud Foundation (VCF) developer-ready workload domain while following the principle of least privilege access?

- A. At the Permissions setting, add the DevOps group and assign the "Editor" permission
- B. At the Global Permissions setting, add the DevOps group and assign the vSphere Kubernetes Manager role
- C. At the Global Permissions setting, add the DevOps group and assign the SupervisorService Cluster Operator role
- D. At the Permissions setting, add the DevOps group and assign the "Can edit" permission

**Correct Answer: A**

**Section:**

**Explanation:**

At the Permissions setting, add the DevOps group and assign the "Editor" permission. This is the recommended way to grant the DevOps team permissions to a vSphere Namespace in a VMware Cloud Foundation (VCF) developer-ready workload domain while following the principle of least privilege access. According to the VMware Cloud Foundation documentation<sup>1</sup>, the Editor permission allows users to create, modify, and delete objects within a vSphere Namespace, such as vSphere Pods, Tanzu Kubernetes clusters, and stand-alone VMs. The Editor permission also allows users to view and manage storage policies, VM classes, and content libraries for the namespace<sup>1</sup>.

B) At the Global Permissions setting, add the DevOps group and assign the vSphere Kubernetes Manager role is not a correct option, because it will grant more privileges than necessary to the DevOps team. The vSphere Kubernetes Manager role is a global role that allows users to manage all aspects of vSphere with Tanzu, such as enabling Workload Management on clusters, creating and configuring vSphere Namespaces, and managing storage policies and VM classes. This role should be assigned only to vSphere administrators who are responsible for configuring and maintaining the VCF developer-ready workload domain<sup>1</sup>.

C) At the Global Permissions setting, add the DevOps group and assign the SupervisorService Cluster Operator role is not a correct option, because it will also grant more privileges than necessary to the DevOps team. The SupervisorService Cluster Operator role is a global role that allows users to manage all aspects of Supervisor Services on clusters, such as creating and configuring Supervisor Service namespaces, managing service accounts and roles, and deploying service instances. This role should be assigned only to vSphere administrators who are responsible for enabling and managing Supervisor Services on VCF developer-ready workload domains<sup>1</sup>.

D) At the Permissions setting, add the DevOps group and assign the "Can edit" permission is not a correct option, because there is no such permission in vSphere with Tanzu. The available permissions for vSphere Namespaces are Viewer, Editor, and Admin. The Viewer permission allows users to view objects within a vSphere Namespace, but not create or modify them. The Admin permission allows users to perform all actions within a vSphere Namespace, as well as manage permissions for other users or groups<sup>1</sup>.

### QUESTION 2

Which statement accurately describes a Tanzu Spherelet?

- A. A Spherelet runs as a VM on the supervisor cluster.
- B. The Spherelet runs as an agent on the vCenter server of the Tanzu-enabled VCF workload domain.
- C. A Spherelet upgrade does not have any impact on the PODs running on the supervisor cluster node.
- D. The Spherelet communicates with the control plane's API server.

**Correct Answer: D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/8.0/vsphere-with-tanzu-concepts-planning/GUID-3E4E6039-BD24-4C40-8575-5AA0EECBBBEC.html>

Spherelet. An additional process called Spherelet is created on each host. It is a kubelet that is ported natively to ESXi and allows the ESXi host to become part of the Kubernetes cluster.

### QUESTION 3

What do VM Storage Policies match to when using vSphere with Tanzu?

- A. Kubernetes storage classes in the Supervisor Cluster

- B. Kubernetes datastores in a namespace
- C. Kubernetes storage classes in a namespace
- D. Kubernetes datastores in the Supervisor Cluster

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/8.0/vsphere-with-tanzu-installation-configuration/GUID-544286A2-A403-4CA5-9C73-8EFF261545E7.html>

After creating storage policies, a vSphere administrator can perform the following tasks: Assign the storage policies to the Supervisor. The storage policies configured on the Supervisor ensure that the control plane VMs, pod ephemeral disks, and container images are placed on the datastores that the policies represent. Assign the storage policies to the vSphere Namespace. Storage policies visible to the namespace determine which datastores the namespace can access and use for persistent volumes. The storage policies appear as matching Kubernetes storage classes in the namespace. They are also propagated to the Tanzu Kubernetes cluster on this namespace. DevOps engineers can use the storage classes in their persistent volume claim specifications.

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#### QUESTION 4

What is the correct sequence of steps to add a new VI Workload Domain in a VMware Cloud Foundation environment?

- A. 1. Configure DNS. 2. Create a network pool. 3. Commission hosts. 4. Add licenses to SDDC Manager. 5. Create the workload domain.
- B. 1. Configure DNS. 2. Commission hosts. 3. Create a network pool. 4. Add licenses to SDDC Manager. 5. Create the workload domain.
- C. 1. Create a network pool. 2. Commission hosts. 3. Add licenses to SDDC Manager. 4. Create the workload domain.
- D. 1. Create a network pool. 2. Commission hosts. 3. Create the workload domain. 4. Add licenses to SDDC Manager.

**Correct Answer: A**

**Section:**



#### QUESTION 5

Which two switches can be used to perform log collection using the SoS tool? (Choose two.)

- A. --psc-logs
- B. --vcenter-logs
- C. --nsxt-logs
- D. --wcp-logs
- E. --sddc-logs

**Correct Answer: A, D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-77C40307-8466-4331-A510-9334C0F6CF32.html>

#### QUESTION 6

During a design workshop, an architect discussed strategies to backup and restore the SDDC Manager in a VMware Cloud Foundation environment. The customer asks for more clarification about the functionality and need for an external SFTP server.

Which two statements should the administrator share with the customer? (Choose two.)

- A. It stores backup for vSAN encryption keys.
- B. It provides better protection and decouples NSX-T backup from the SDDC Manager.

- C. It is a prerequisite for restoring Cloud Builder file-based backups.
- D. It is a prerequisite for restoring SDDC Manager file-based backups.
- E. It stores backup for vRealize Suite Lifecycle Manager.

**Correct Answer: B, D**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation<sup>1</sup>, an external SFTP server is recommended for storing backups of SDDC Manager and NSX-T Manager for the following reasons:

It provides better protection against failures because it decouples NSX-T backups from SDDC Manager.

It is a prerequisite for restoring SDDC Manager file-based backups.

Therefore, statements B and D are correct and should be shared with the customer.

1: Backup and Restore of VMware Cloud Foundation

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-F8634D37-FA26-40DF-A135-62D0265DA4FA.html>

By default, NSX Manager file-based backups are taken and stored on an SFTP server that is built into the SDDC Manager appliance. It is recommended that you configure an external SFTP server as a backup location for the following reasons: An external SFTP server is a prerequisite for restoring SDDC Manager file-based backups. Using an external SFTP server provides better protection against failures because it decouples NSX backups from SDDC Manager.

#### QUESTION 7

Which tool can be used to add a new vSphere Cluster to an existing VI Workload Domain?

- A. vSphere Client
- B. VMware Imaging Appliance
- C. SDDC Manager
- D. Cloud Builder

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-D3C55AA8-D4B9-49D4-A26F-7A713A141251.html>

SDDC Manager is the tool that can be used to add a new vSphere cluster to an existing VI workload domain. SDDC Manager provides a unified interface for managing the lifecycle of the VMware Cloud Foundation components, including creating and expanding workload domains.

VMware Cloud Foundation Administration Guide, Expand a Workload Domain section

VMware Cloud Foundation Specialist (v2), Objective 4.1: Given a scenario, identify the steps to add a new vSphere cluster to an existing VI workload domain.

#### QUESTION 8

An architect is designing networking for a developer-ready infrastructure on VMware Cloud Foundation.

Which use case would require the architect to consider a CIDR range larger than /27 for Egress?

- A. More than 30 services are required
- B. More than 30 pods are required
- C. More than 30 load balancers are required
- D. More than 30 namespaces are required

**Correct Answer: D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-B1388E77-2EEC-41E2-8681-5AE549D50C77.html#:~:text=Only%20one%20egress%20IP%20address%20is%20assigned%20for%20each%20namespace%20in%20the%20Supervisor%20Cluster>



### QUESTION 9

Which two components are required when planning for stretched clusters in a VMware Cloud Foundation environment? (Choose two.)

- A. There must be separate Network Pools for each Availability Zone.
- B. A third site is required for a witness host.
- C. The host overlay network can use static IP addresses.
- D. Use shared vSphere vMotion, vSAN, and host overlay networks.
- E. The round-trip time (RTT) between sites must be 15 milliseconds.

**Correct Answer: A, B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-CDEEF4C6-7DFC-4EB5-B5F5-3C41230926F9.html>

### QUESTION 10

An administrator needs to upgrade the current VMware Cloud Foundation (VCF) environment from version 4.1 to 4.3, knowing that the environment does not have direct access to the internet. Which steps should be performed to download the online bundles?

- A. 1. Setup a proxy server. 2. Define the credentials to access the proxy server. 3. Allow bidirectional traffic on the firewall.
- B. 1. Setup a proxy server. 2. Configure the proxy in SDDC Manager. 3. Restart the LCM service.
- C. 1. Setup a proxy server. 2. Define the credentials to access the proxy server. 3. Configure the proxy server in vSphere Lifecycle Manager (vLCM). 4. Restart vSphere Lifecycle Manager (vLCM).
- D. 1. Setup a proxy server. 2. Define the credentials to access the proxy server. 3. Allow bidirectional traffic on the firewall. 4. Configure the proxy server in SDDC Manager.

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.3/vcf-lifecycle/GUID-BB15EADE-DCD3-4D51-824E-124C9B364D20.html>

### QUESTION 11

Which functionality is provided by NSX Global Manager?

- A. Global Managers move control plane to a central place.
- B. Configurations requiring protection against site failures must be configured in the Global Manager.
- C. Global configurations are sent to all Local Managers.
- D. Global Managers move all existing Local Manager configuration to the Global Manager.

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-NSX/4.1/administration/GUID-48A7A433-F3A0-4F77-99C4-B6280CD5D3F4.html>

### QUESTION 12

Where is the Harbor Image Registry service enabled?

- A. vSAN Cluster
- B. Supervisor Cluster
- C. vSphere Cluster

D. Supervisor Namespace

**Correct Answer: B**

**Section:**

**Explanation:**

'In the vSphere Client, browse to the vCenter cluster where Workload Management is enabled. Select Configure. Select Supervisor Cluster. Select Image Registry. Click Enable Harbor. Select the Storage Policy for placement of container images. Click OK to complete the process' <https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-AE24CF79-3C74-4CCD-B7C7-757AD082D86A.html>

#### QUESTION 13

Which product SSL certificate replacement can be automated using the SDDC Manager?

- A. vRealize Automation
- B. vRealize Log Insight
- C. NSX Manager
- D. Horizon

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-80431626-B9CD-4F21-B681-A8F5024D2375.html>

#### QUESTION 14

Which two configuration steps must a VMware Cloud Foundation administrator apply to achieve north/south connectivity while setting up an edge VM node for a workload domain from the SDDC Manager user interface? (Choose two.)

- A. ToR Switches VRFs
- B. OSPF Configuration
- C. BGP Configuration
- D. vSphere VDS Uplinks
- E. NSX VDS Uplinks

**Correct Answer: D, E**

**Section:**

**Explanation:**

The two configuration steps that a VMware Cloud Foundation administrator must apply to achieve north/south connectivity while setting up an edge VM node for a workload domain from the SDDC Manager user interface are:

NSX VDS Uplinks

BGP Configuration

According to the web search results, the NSX VDS uplinks are required to connect the edge VM node to the physical network and provide north/south traffic for the overlay and public networks. The NSX VDS uplinks must be configured with named teaming policies that pin the traffic to specific VLANs and uplink ports<sup>1</sup>. The BGP configuration is required to enable dynamic routing between the NSX Tier-0 gateway and the physical routers. The BGP configuration must be done on both the NSX-T Data Center and the ToR switches<sup>2</sup>.

#### QUESTION 15

Which two configurations are part of the VMware Cloud Builder validation process? (Choose two.)

- A. License key Validates format, validity, and expiry for ESX, vSAN, vCenter Server, NSX, vRealize Suite, and Log Insight license keys
- B. Availability configuration: Validates the access to the configured backup locations
- C. Network configuration: Validates CIDR to IP address validity, IP addresses in use, gateways, invalid or missing VLANs, invalid or missing MTU, and network spec availability for all components

- D. Certificates: Validates certificates for ESX, vCenter Server, and NSX
- E. Passwords: Validates specified passwords Checks for minimum length, invalid characters, and format

**Correct Answer: C, E**

**Section:**

**Explanation:**

See 'Figure 25. Configure Cloud Builder validation' at <https://infohub.delltechnologies.com/l/dell-poweredge-mx-deployment-with-vmware-cloud-foundation-deployment-guide/vmware-cloud-builder-configuration-validation> <https://my-cloudy-world.com/2021/05/28/vmware-cloud-builder-bringup-validation-tasks/>

#### QUESTION 16

Which statement is true regarding NSX Manager configuration in a VMware Cloud Foundation environment?

- A. NSX Managers can be deployed to different VLANs.
- B. The cluster virtual IP address is used for API and GUI access to NSX Managers.
- C. Traffic is load-balanced across all NSX Managers while using the virtual IP address.
- D. The cluster virtual IP address is attached to all NSX Managers.

**Correct Answer: B**

**Section:**

**Explanation:**

According to VMware Cloud Foundation Planning and Preparation Workbook, a statement that is true regarding NSX Manager configuration in a VMware Cloud Foundation environment is:

The cluster virtual IP address (VIP) address must be used for API and GUI access to NSX Managers

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-management-domain-design/GUID-B0C6B2C7-E778-4CD1-BBAD-986A8AF5B930.html>

#### QUESTION 17

A systems administrator is tasked to deploy a management domain during VMware Cloud Foundation Bring-Up process. What are the minimum hardware requirements for the management cluster?

- A. 2 vSAN Ready Nodes, 192 GB RAM per server, and 4 10GbE NICs
- B. 8 vSAN Ready Nodes, 256 GB RAM per server, and 2 10GbE NICs
- C. 4 vSAN Ready Nodes, 192 GB RAM per server, and 2 10GbE NICs
- D. 6 vSAN Ready Nodes, 256 GB RAM per server, and 4 10GbE NICs

**Correct Answer: C**

**Section:**

**Explanation:**

The minimum hardware requirements for the management cluster during VMware Cloud Foundation Bring-Up process are:

4 vSAN Ready Nodes

192 GB RAM per server

2 10GbE NICs

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.2/vcf-42-getting-started/GUID-0A0D7E16-C4D8-4B05-8C23-F7F2FF12DE64.html>

#### QUESTION 18

Which order of operations deletes a VI Workload Domain from a VMware Cloud Foundation environment?

- A. 1. Migrate VMs.  
2. Remove NSX Edge clusters.  
3. Remove the Workload Domain.  
4. Decommission hosts.

- 5. Delete the network pool.
- B.
  - 1. Migrate VMs.
  - 2. Remove NSX Edge clusters.
  - 3. Remove the Workload Domain.
  - 4. Delete the network pool.
  - 5. Decommission hosts.
- C.
  - 1. Migrate VMs.
  - 2. Remove the Workload Domain.
  - 3. Decommission hosts.
  - 4. Delete the network pool.
- D.
  - 1. Migrate VMs.
  - 2. Decommission hosts.
  - 3. Remove the Workload Domain.
  - 4. Delete the network pool.

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-F8398C84-2CBC-417D-944B-FA492009B072.html>

#### QUESTION 19

An architect is designing networking for a developer-ready infrastructure on VMware Cloud Foundation. During the discussion with the network team, a question comes up about the use of a routable CIDR range. Which item uses this type of range?

- A. ClusterIP
- B. vSphere Pod
- C. Ingress
- D. Kubernetes services



**Correct Answer: C**

**Section:**

**Explanation:**

This is because an ingress is a Kubernetes resource that exposes HTTP and HTTPS routes from outside the cluster to services within the cluster<sup>1</sup>. An ingress can use a routable CIDR range to assign IP addresses to the ingress controllers that handle the traffic routing.

<https://docs.vmware.com/en/VMware-Cloud-Foundation/services/vcf-developer-ready-infrastructure-v1/GUID-AF178A31-D09A-4265-89FD-5987D1B36757.html>

#### QUESTION 20

A VMware Cloud Foundation administrator is required to enable Workload Management (vSphere with Tanzu) on an existing workload domain cluster, which is currently licensed with a vSphere Enterprise Plus license. Which action, if any, is required to complete this task?

- A. Add a license for vSphere with Tanzu with sufficient CPU capacity to the SDDC Manager inventory, and then assign the license to the cluster in SDDC Manager
- B. No action is required since SDDC Manager licenses include an entitlement for vSphere with Tanzu.
- C. No action is required since the vSphere Enterprise Plus license supports vSphere with Tanzu.
- D. Add a license for vSphere with Tanzu with sufficient CPU capacity to both the SDDC Manager and vCenter Server, and then assign the license to the cluster in vCenter Server

**Correct Answer: D**

**Section:**

**Explanation:**



If you want to replace an existing license with a newly added license, you must add and assign the new license in the management UI (for example, vSphere Client or NSX Manager) of the component whose license you are replacing. <https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-FD3B1D45-AC70-45CC-A507-944D1A476EB9.html>

#### QUESTION 21

A systems administrator needs to apply a custom ESXi image to a host using VMware Imaging Appliance (VIA). Which statement is correct when preparing a host for imaging?

- A. Onboard NICs should be enabled on the server.
- B. VIA service does not support UEFI boot mode.
- C. VMware Cloud Builder appliance must be deployed in a tagged VLAN/Network.
- D. PXE Boot must be configured as the second boot option.

**Correct Answer: A**

**Section:**

**Explanation:**

This is because VIA service uses PXE boot to install ESXi on the servers, and it requires onboard NICs to be enabled and connected to an untagged VLAN/Network1.

According to VMware documentation on VMware Imaging Appliance, when preparing a host for imaging using VIA, it is recommended to enable the onboard NICs on the server. This enables the network adapter to participate in the boot sequence of the host to retrieve the image from the Imaging Appliance.

Here is the relevant quote from the documentation:

'To prepare the host, ensure that the onboard NICs are enabled on the server. During boot up, the server firmware detects the network adapter and adds it to the boot sequence list so that it can participate in network boot.'

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-deploy/GUID-735928E5-1DD7-44E5-BE32-E598230326AD.html>

#### QUESTION 22

An administrator is tasked with changing the password of the SDDC Manager super user account in a newly installed VCF environment.

Which method must the administrator use to complete this task?

- A. 1 Log in to SDDC manager UI as a user with the ADMIN role. 2. Go to Administration > Security > Password Management. 3. Select the SDDC Manager account from the component drop-down menu. 4. Click Rotate Now button.
- B. 1 SSH in to the SDDC Manager VM using the vcf user account. 2. Switch to the root user 3. Enter the passwd admin command. 4. Enter and retype the new password.
- C. 1 Log in to the SDDC manager UI as a user with the ADMIN role 2. Go to Developer Center > API Explorer 3. Expand APIs for managing users. 4. Update password for root user.
- D. 1 SSH in to the SDDC Manager VM using the vcf user account. 2. Switch to the root user. 3. Enter the passwd vcf command. 4. Enter and retype the new password.

**Correct Answer: A**

**Section:**

**Explanation:**

To change the password of the SDDC Manager super user account, the administrator should follow these steps:

Log in to the SDDC Manager UI as a user with the ADMIN role.

Go to Administration > Security > Password Management.

Select the SDDC Manager account from the component drop-down menu.

Click Rotate Now button.

This is the recommended method for changing the password of the SDDC Manager super user account, as documented in the VMware Cloud Foundation Administration Guide: <https://docs.vmware.com/en/VMware-Cloud-Foundation/index.html>

#### QUESTION 23

An administrator needs additional capacity on a vSAN cluster. Each host currently has only one disk group. Which two approaches can be used to expand storage capacity in this situation? (Choose two.)

- A. Increase the number of cache disks in the existing disk group.
- B. Add an additional disk group.
- C. Disable compression.

- D. Increase the number of capacity disks in the existing disk group
- E. Disable deduplication.

**Correct Answer: B, D**

**Section:**

**Explanation:**

To expand storage capacity in a vSAN cluster with one disk group, you can either add more drives to hosts in the cluster, which is commonly referred to as scaling up, or add capacity drives to existing disk groups

Option B: Add an additional disk group - According to search result [1], adding additional drives to a host will increase both capacity and performance [1], and each disk group contains one flash cache device and one or multiple capacity devices for persistent storage [2]. Therefore, adding an additional disk group to each host would increase the storage capacity of the vSAN cluster.

Option D: Increase the number of capacity disks in the existing disk group - Search result [1] explains that vSAN clusters require capacity and cache devices to function, and each disk group can contain multiple capacity devices for persistent storage [2]. Thus, an additional way to expand storage capacity in the vSAN cluster would be to increase the number of capacity disks in the existing disk group.

A disk group is a collection of one or more flash-based cache devices and one or more capacity devices that provide storage capacity for a vSAN cluster. A vSAN cluster can have multiple disk groups, and each disk group can have a different configuration.

To expand storage capacity in a vSAN cluster where each host currently has only one disk group, the administrator can add an additional disk group or increase the number of capacity disks in the existing disk group.

Adding an additional disk group involves adding more disks to the host and creating a new disk group. This approach can provide additional capacity and performance benefits, as the new disk group can be configured with different settings to optimize performance and capacity.

Increasing the number of capacity disks in the existing disk group involves adding more capacity devices to the existing disk group. This approach can provide additional capacity, but may not necessarily provide performance benefits as the existing disk group may already be fully utilized.

VMware vSAN 7.0 Design and Sizing Guide: <https://storagehub.vmware.com/t/vmware-vsan/vmware-vsan-7-0-design-and-sizing-guide-2/>

VMware vSAN Documentation: <https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere.vsan-planning.doc/GUID-9B7C9685-64C5-49C2-8E3C-CC2E47AFBC6F.html>

#### QUESTION 24

A VCF architect collected the following requirements when designing the expansion of a new VI Workload Domain with twenty four vSAN Ready nodes, each with a dual-port 25Gbps network interface card:

- \* Provide scalable high-performance networking with layer-3 termination at top-of-rack
- \* Protect workloads from switch/NIC/rack failure
- \* Provide isolation for DMZ workloads
- \* Provide at-least 25Gbps dedicated bandwidth to backup traffic
- \* Easily accept workloads on traditional VLAN-backed networks
- \* Fully-supported by VMware

Which three design considerations meet all of these requirements? (Choose three.)

- A. Two-node Edge Cluster with ECMP
- B. Spine and Leaf network topology with layer-3 at Spine
- C. Stretched Clustering
- D. Spine and Leaf network topology with layer-3 at top of rack
- E. Two-node Edge Cluster with BFD
- F. Core Aggregation network topology

**Correct Answer: A, D, E**

**Section:**

#### QUESTION 25

An administrator has registered an external identity source in a consolidated architecture and would like to make sure that any subsequent workload domains can be accessed using the same identity sources.

How can this goal be achieved with VMware Cloud Foundation?

- A. By configuring IWA as an identity source
- B. By configuring LDAPS as an identity source
- C. By keeping the pre-configured defaults



D. By replicating vSphere SSO configuration

**Correct Answer: D**

**Section:**

**Explanation:**

vSphere Single Sign-On (SSO) provides secure authentication and authorization services for VMware Cloud Foundation components, including vCenter Server and Platform Services Controller (PSC). In a consolidated architecture deployment of VMware Cloud Foundation, the vSphere SSO configuration is shared across all the workload domains.

To ensure that subsequent workload domains can use the same identity sources as an external identity source registered in a consolidated architecture, the administrator needs to replicate the vSphere SSO configuration. This can be achieved by configuring the same identity sources for vSphere SSO across all the workload domains.

Configuring IWA (Integrated Windows Authentication) or LDAPS (Lightweight Directory Access Protocol over SSL) as an identity source is a part of configuring the vSphere SSO configuration for identity sources.

Keeping the pre-configured defaults does not guarantee that the subsequent workload domains will use the same identity sources as the external identity source registered in a consolidated architecture.

VMware Cloud Foundation Operations and Administration Guide: <https://docs.vmware.com/en/VMware-Cloud-Foundation/index.html>

VMware vSphere Security Guide: <https://docs.vmware.com/en/VMware-vSphere/7.0/vsphere-security-guide.pdf>

To ensure that any subsequent workload domains can be accessed using the same identity sources, it is necessary to replicate the vSphere SSO configuration across all the workload domains in a consolidated architecture deployment. This can be achieved by replicating the vSphere SSO configuration between the primary and additional SDDC Manager instances. This ensures that all the workload domains registered with the SDDC Manager will be able to consume resources and services from the same identity sources without any additional configuration in each individual workload domain.

VMware Cloud Foundation Administration Guide <https://docs.vmware.com/en/VMware-Cloud-Foundation/index.html>

#### QUESTION 26

Which two options can be used to create a new VMware Cloud Foundation VI workload domain? (Choose two.)

- A. SDDC Manager UI
- B. PowerCLI
- C. Cloud Builder UI
- D. vCenter UI
- E. REST API



**Correct Answer: A, E**

**Section:**

**Explanation:**

The SDDC Manager UI provides a single point of control for managing and monitoring your VMware Cloud Foundation instance and for provisioning workload domains. You use the navigation bar to move between the main areas of the user interface. The SDDC Manager UI provides an integrated view of the physical and virtual infrastructure and centralized access to manage the physical and logical resources.

The REST API can also be used to create a new VI workload domain using VMware Cloud Foundation. The VMware Cloud Foundation API Reference Guide provides information on available operations.

#### QUESTION 27

What is a valid procedure to replace an expired vSAN license in a VMware Cloud Foundation environment?

- A. 1 Add a new vSAN license to the SDDC Manager and vCenter Server.  
2. Reassign the vSAN license to the cluster in the vCenter Server.  
3. Remove the expired vSAN license from the SDDC Manager and vCenter Server.
- B. 1 Add a new vSAN license to the SDDC Manager.  
2. Connect to SDDC Manager via SSH, and then restart Domain Manager using `systemctl restart domainmanager`.  
3. Verify in the SDDC Manager whether a new vSAN license has been assigned to the cluster.
- C. 1 Add a new vSAN license to the vCenter Server.  
2. Connect to SDDC Manager via SSH, and then restart Lifecycle Management using `systemctl restart lcm`.  
3. Verify in the vCenter Server whether a new vSAN license has been assigned to the cluster.
- D. 1 Add a new vSAN license to the SDDC Manager.  
2. Reassign the vSAN license to the cluster in the SDDC Manager.

3. Remove the expired vSAN license from the SDDC Manager

**Correct Answer: A**

**Section:**

**Explanation:**

a valid procedure to replace an expired vSAN license in a VMware Cloud Foundation environment is Option A. You can add a new vSAN license to both the SDDC Manager and vCenter Server. Then reassign the vSAN license to the cluster in the vCenter Server. Finally, remove the expired vSAN license from both SDDC Manager and vCenter Server. <https://my-cloudy-world.com/2022/06/28/updating-a-vsan-license-in-vmware-cloud-foundation/>

#### QUESTION 28

What is a supported function of the vSphere Lifecycle Manager (LCM) in VMware Cloud Foundation (VCF)?

- A. Upgrade vCenter Server
- B. Upgrade SDDC Manager
- C. Downgrade VM hardware version
- D. Check hardware compatibility of hosts and clusters

**Correct Answer: D**

**Section:**

**Explanation:**

12-29 vSphere Lifecycle Manager Baselines and Images

You use vSphere Lifecycle Manager baselines and baseline groups to perform the following tasks:

\* Upgrade and patch ESXi hosts. \*

Install and update third-party software on ESXi hosts.

You use vSphere Lifecycle Manager images to perform the following tasks: \*

Install the desired ESXi version. \* Install and update third-party software on ESXi hosts in a cluster.

\* Update and upgrade the ESXi version in a cluster. \* Update ESXi host firmware in a cluster. \* Generate and use a recommended image for your cluster. \* Check the hardware compatibility of hosts and clusters.

<https://docs.vmware.com/en/VMware-vSphere/8.0/vsphere-lifecycle-manager/GUID-8883AEB4-F740-4B6B-8A44-55AA999B4089.html>

A supported function of the vSphere Lifecycle Manager (LCM) in VMware Cloud Foundation (VCF) is to check hardware compatibility of hosts and clusters. This function allows you to verify that the hosts and clusters in your VCF environment meet the requirements for the desired state image that you want to apply. You can also view the compatibility status and details of each host and cluster in the SDDC Manager dashboard.

#### QUESTION 29

A systems administrator is tasked to deploy VMware Cloud Foundation (VCF) and has already deployed the VMware Cloud Builder appliance.

What is the next step the systems administrator should take?

- A. Deploy the Management Domain using VMware Cloud Builder.
- B. Prepare and configure the ESXi hosts to be used in the deployment.
- C. Configure the Management Domain using custom certificates.
- D. Upload the Deployment Parameter Workbook.

**Correct Answer: B**

**Section:**

**Explanation:**

The next step the systems administrator should take is to prepare and configure the ESXi hosts to be used in the deployment. According to the VMware Cloud Foundation documentation, before you can deploy the management domain using VMware Cloud Builder, you must prepare the ESXi hosts that will be part of the management domain and the VI workload domains. You need to install ESXi on the hosts, configure the network settings, claim disks for vSAN, and optionally configure certificates for the hosts. You can use different methods to prepare the ESXi hosts, such as using a custom ISO image, using the VMware Imaging Appliance, or installing ESXi interactively.

Uploading the Deployment Parameter Workbook is not the next step, because it is done after preparing the ESXi hosts. The Deployment Parameter Workbook is a spreadsheet that contains all the parameters required for deploying VMware Cloud Foundation, such as IP addresses, host names, passwords, and license keys. You need to download and complete the workbook before uploading it to VMware Cloud Builder.

Configuring the Management Domain using custom certificates is not the next step, because it is an optional step that can be done after deploying the management domain. Custom certificates are used to secure the communication between the components of VMware Cloud Foundation, such as SDDC Manager, vCenter Server, and NSX-T Manager. You can use either self-signed certificates or certificates signed by a certificate authority (CA) [1]

Deploying the Management Domain using VMware Cloud Builder is not the next step, because it is done after preparing the ESXi hosts and uploading the Deployment Parameter Workbook. The management domain is the first domain that is deployed in VMware Cloud Foundation, and it contains the components for managing and operating the SDDC platform, such as SDDC Manager, vCenter Server, NSX-T Manager, and NSX Edge nodes. You use VMware Cloud Builder to deploy the management domain by following a guided workflow on its UI [1]

### QUESTION 30

A systems administrator has recently added newly-commissioned hosts in the the VI workload domain, and IP addresses are automatically configured to their associated network pool. The administrator reviews which storage options require only vMotion and NFS networks in the network pool.

Which two storage options have this requirement? (Choose two.)

- A. vVols on ISCSI
- B. NFS
- C. vSAN and NFS
- D. vVols on NFS
- E. vSAN

**Correct Answer: B, E**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation on network requirements, vSAN requires only the vMotion and NFS networks to be configured in the network pool. This is because vSAN traffic can be carried over the vMotion network, and the NFS network is needed to support the use of NFS datastores [1].

NFS is a file-based storage protocol that can be accessed over IP networks. It does not require any special hardware or software, and can be accessed by any device that supports the NFS protocol [2]. As such, it only requires the NFS network to be configured in the network pool.

Therefore, the correct answers are B. NFS and E. vSAN.

### QUESTION 31

An architect is tasked with deploying a new VI Workload Domain cluster to support the HR system. The default storage policy must satisfy the following requirements:

- \* Support two host failures
- \* Use the least amount of hosts
- \* Maximize user capacity

Which configuration will satisfy these requirements?

- A. 4 Hosts, FTT=2, RAID 5/6
- B. 5 Hosts, FTT=2, RAID 1
- C. 4 Hosts, FTT=2, RAID 1
- D. 5 Hosts, FTT=2, RAID 5/6

**Correct Answer: B**

**Section:**

### QUESTION 32

Which service is integrated with VMware Cloud Foundation and enables a centralized and simplified lifecycle management of ESXi host?

- A. vRealize Suite Lifecycle Manager
- B. vSphere Lifecycle Manager
- C. Solutions Manager

D. vCenter Lifecycle Manager

**Correct Answer: B**

**Section:**

**Explanation:**

The service that is integrated with VMware Cloud Foundation and enables a centralized and simplified lifecycle management of ESXi host is Option B: vSphere Lifecycle Manager (vLCM)<sup>1</sup>.

vLCM enables you to create cluster images for centralized and simplified lifecycle management of ESXi hosts including firmware. When a VI workload domain cluster is created with an image, you can update and upgrade the ESXi version on all hosts in the cluster collectively<sup>1</sup>.

vSphere Lifecycle Manager (vLCM) is a key component of VMware Cloud Foundation (VCF) that enables centralized and simplified lifecycle management of ESXi hosts. It provides a single interface to manage host baselines, firmware and driver updates, and upgrades. With vLCM, administrators can create custom images for ESXi hosts, define baselines for host compliance, and apply updates to hosts in a coordinated manner. This helps to ensure consistency across the environment and reduce the risk of configuration drift. (source: VMware Cloud Foundation 4.x Architecture and Deployment Guide)

### QUESTION 33

A VMware Cloud Foundation administrator created a Tanzu Namespace in one of the workload domains. Which two functions related to permissions can be performed on the newly created Namespace? (Choose two)

- A. Add permissions only from the vSphere.local domain.
- B. Permissions can be set to either view or edit.
- C. Add permissions to users from vCenter Single Sign-On identity sources.
- D. Add a custom role to create more granular permissions.
- E. Add permissions to local vSphere with Tanzu users only.

**Correct Answer: C, D**

**Section:**

**Explanation:**

A quote from reference [1] states that, 'To add permissions to users or groups from vCenter Single Sign-On identity sources, the Tanzu Kubernetes cluster administrator can use either the vSphere Client or kubectl.'

Another quote from reference [1] states that, 'By default, a Tanzu Kubernetes cluster includes a set of predefined roles that provides granular permission control for Kubernetes objects. The predefined roles enable cluster groups to be created with specific permissions across the Kubernetes namespace hierarchy. Administrators can also create custom roles to provide more granular permission control that is specific to their organization's requirements.'

### QUESTION 34

Which two requirements are needed to add new hosts to an existing VI workload in a VMware Cloud Foundation environment? (Choose two.)

- A. The host uses the same storage type as the existing cluster hosts.
- B. The host uses heterogenous hardware.
- C. The host uses a minimum of four network ports.
- D. The host uses the same network pool
- E. The host uses only the VLAN network.

**Correct Answer: A, D**

**Section:**

**Explanation:**

When adding new hosts to an existing VI workload domain in VMware Cloud Foundation, the new hosts must meet the following requirements:

A) The host uses the same storage type as the existing cluster hosts. D. The host uses the same network pool.

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.3/install-and-configure-vmware-cloud-foundation/GUID-7788F002-2FEA-426E-A153-7A78A1B200A7.html>

The host must use the same storage type (vSAN or NFS) as other hosts in the cluster<sup>1</sup>.

The host must use a network pool that is compatible with other hosts in the cluster<sup>1</sup>.

The host must have at least two network ports for management traffic and two network ports for vSAN traffic (if using vSAN storage)<sup>2</sup>.

### QUESTION 35

Which two options are only available when using vSphere Lifecycle Manager Images? (Choose two.)

- A. Upgrade VM Hardware Compatibility versions.
- B. Update the firmware of all ESXi hosts in a cluster.
- C. Install and update third-party software on all ESXi hosts in a cluster.
- D. Check the hosts and clusters against the vSAN Hardware Compatibility List.
- E. Upgrade and patch ESXi hosts.

**Correct Answer: B, C**

**Section:**

**Explanation:**

This is because vSphere Lifecycle Manager images can include firmware updates and third-party software components that can be applied to all hosts in a cluster<sup>12</sup>. These options are only available when using vSphere Lifecycle Manager images, not when using vSphere Lifecycle Manager baselines<sup>2</sup>.

<https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere-lifecycle-manager.doc/GUID-9A112231-AD7C-4EF5-AB6A-A8DAA704D307.html>

<https://docs.vmware.com/en/VMware-vSphere/7.0/com.vmware.vsphere-lifecycle-manager.doc/GUID-9A20C2DA-F45F-4C9B-9D17-A89BCB62E6EF.html>

### QUESTION 36

Which three components are required to deploy a stretched cluster in a VMware Cloud Foundation environment? (Choose three.)

- A. vSAN, host overlay and vMotion network stretched across both sites
- B. DHCP on the NSX Edge overlay network
- C. DHCP on the host overlay network
- D. One witness host per site
- E. One witness host per vSAN stretched cluster
- F. vSAN: host overlay and vMotion network per data site



**Correct Answer: A, C, E**

**Section:**

**Explanation:**

This is because when deploying a stretched cluster in a VMware Cloud Foundation environment, you must ensure that:

The vSAN network, the host overlay network and the vMotion network are stretched across both availability zones<sup>12</sup>. These networks enable data replication, communication and migration between hosts in different sites.

The host overlay network has DHCP enabled to provide IP addresses to hosts<sup>1</sup>. This simplifies the configuration and management of hosts in different sites.

Each vSAN stretched cluster has one witness host deployed in a separate location from both availability zones<sup>12</sup>. The witness host acts as a tie-breaker in case of a site failure or split-brain scenario.

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-7B4CC729-20BD-4CC9-B855-B38F02F74D40.html>

### QUESTION 37

A VMware Cloud Foundation administrator has been tasked with replacing self-signed certificates with those signed by a third-party Certificate Authority. A security policy disallows the integration and use of Microsoft Active Directory Certificate Services and prefers an external provider.

Which two steps must be taken in order to configure these certificates? (Choose two.)

- A. Generate Certificate Signing Requests from SDDC Manager.
- B. Ensure that the external provider has Administrator rights in vCenter.
- C. Create and package the certificates in a domain\_name.tar.gz file
- D. Use the sddcmanager-ssl-util.sh utility to list and delete existing certificates.
- E. Generate public-private key pairs using the external provider.

**Correct Answer: A, C**

**Section:**

**Explanation:**

A) Generate Certificate Signing Requests from SDDC Manager - In order to replace the self-signed certificates with third-party signed certificates, the Certificate Signing Requests (CSRs) need to be generated. This can be done from the SDDC Manager UI.

C) Create and package the certificates in a domain\_name.tar.gz file - After the CSRs are generated, they can be used to obtain third-party signed certificates from a certificate authority. Once the certificates are obtained, they need to be packaged in a domain\_name.tar.gz file and uploaded to SDDC Manager.

Generate Certificate Signing Requests (CSRs) from SDDC Manager for each component that requires a certificate<sup>1</sup>. You can do this from the SDDC Manager UI or using an API call<sup>1</sup>.

Have the CSRs signed by a third-party Certificate Authority of your choice<sup>1</sup>. You can use any external provider that meets your security policy requirements.

Create and package the certificates in a domain\_name.tar.gz file according to the naming convention and folder structure specified by SDDC Manager<sup>1</sup>. You can use any compression tool that supports gzip format.

Upload and install the certificates using SDDC Manager UI or API<sup>1</sup>. You can also verify and troubleshoot the certificate installation using SDDC Manager.

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-80431626-B9CD-4F21-B681-A8F5024D2375.html>

### QUESTION 38

Which order of steps should an administrator use to replace a failed host in a stretched cluster?

- A. Decommission the failed host.
  - 2. Remove the host using cluster APIs.
  - 3. Add the newly commissioned host to the cluster using cluster APIs.
  - 4. Commission the new host with the correct network.
- B. 1. Remove the host using cluster APIs.
  - 2. Decommission the failed host.
  - 3. Commission the new host with the correct network.
  - 4. Add the newly commissioned host to the cluster using cluster APIs.
- C. 1. Remove the host using cluster APIs.
  - 2. Decommission the failed host.
  - 3. Add the newly commissioned host to the cluster using cluster APIs.
  - 4. Commission the new host with the correct network.
- D. 1. Decommission the failed host.
  - 2. Remove the host using cluster APIs.
  - 3. Commission the new host with the correct network.
  - 4. Add the newly commissioned host to the cluster using cluster APIs.



**Correct Answer: A**

**Section:**

**Explanation:**

This is because according to VMware documentation<sup>1</sup>, these are the steps to replace a failed host in a stretched cluster:

Run the compact cluster API to remove any stale data from vSAN.

Decommission the host to be removed using SDDC Manager UI or API.

Commission the replacement host to the same network pool as the removed host using SDDC Manager UI or API.

Add the newly commissioned host to the cluster using SDDC Manager UI or API.

According to the VMware documentation, when replacing a failed host in a stretched cluster, the first step is to decommission the failed host. This should be followed by removing the host using cluster APIs, commissioning the new host with the correct network, and then adding the newly commissioned host to the cluster using cluster APIs.

### QUESTION 39

What is required as part of enabling the Harbor Image Registry?

- A. Storage Policy
- B. Tanzu Enabled Cluster



- C. Access Control
- D. Resource Limits

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-EC79A6DE-477A-40C1-A90C-9DF96465CDA6.html>

**QUESTION 40**

Which two health checks can be performed using the SoS tool? (Choose two.)

- A. ---password-health
- B. ---credential-health
- C. ---system-check
- D. ---health-check
- E. ---esxi-health

**Correct Answer: A, D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-9EBC6D42-B799-4177-9EFF-78E98FDBA0FD.html>

**QUESTION 41**

What is a characteristic about the Credentials Worksheet in the Deployment Parameter Workbook?

- A. Passwords can be common only for appliance users.
- B. Passwords can be different per user.
- C. Passwords must be different per user.
- D. Passwords must be common across all users.

**Correct Answer: C**

**Section:**

**Explanation:**

According to VMware Cloud Foundation Planning and Preparation Workbook, when filling out the Credentials Worksheet in the Deployment Parameter Workbook, you must provide different passwords for each user account that will be created during deployment. This ensures security and compliance for your environment.

**QUESTION 42**

Which two functionalities does a NSX Tier-0 Gateway provide to a vSphere with Tanzu deployment? (Choose two.)

- A. Gateway for Segments
- B. Layer 2 Switching
- C. Connectivity to all Tier-1 Gateways
- D. Downlink Connections to Segments
- E. Connectivity to physical networks and routers

**Correct Answer: C, E**

**Section:**



**Explanation:**

According to About Architecture and Design for a vSphere with Tanzu Workload Domain<sup>4</sup>, two of the functionalities that a NSX Tier-0 Gateway provides to a vSphere with Tanzu deployment are:

Connectivity to all Tier-1 Gateways: A Tier-0 Gateway connects to one or more Tier-1 Gateways that provide routing services for each namespace in vSphere with Tanzu.

Connectivity to physical networks and routers: A Tier-0 Gateway connects to external networks via uplink interfaces that can use static routing or dynamic routing protocols such as BGP.

**QUESTION 43**

Which two prerequisites must be met before creating a vSphere with Tanzu Namespace? (Choose two.)

- A. Define CPU and Memory limits
- B. Create storage policies for persistent storage
- C. Enable a cluster with vSphere with Tanzu
- D. Enable Harbor Image Registry
- E. Assign user and groups access

**Correct Answer: B, C**

**Section:****Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-177C23C4-ED81-4ADD-89A2-61654C18201B.html>

According to the VMware Cloud Foundation documentation<sup>1</sup>, the prerequisites for creating a vSphere Namespace are:

Configure a cluster with vSphere with Tanzu. This is the first step to enable Workload Management on a vSphere cluster and create a Kubernetes management cluster known as a Supervisor Cluster<sup>2</sup>

Create storage policies for persistent storage. Storage policies can define different types and classes of storage, for example, gold, silver, and bronze. They are used to specify the storage requirements for the vSphere Namespace and the workloads that run on it<sup>1</sup>

A) Define CPU and Memory limits is not a correct option, because it is not a prerequisite for creating a vSphere Namespace, but a configuration option that can be done after creating the namespace. CPU and Memory limits are used to specify the resource allocation for the vSphere Namespace and the workloads that run on it<sup>1</sup>

D) Enable Harbor Image Registry is not a correct option, because it is not a prerequisite for creating a vSphere Namespace, but an optional feature that can be enabled after creating the namespace. Harbor Image Registry is an embedded container registry that provides secure image management for the Supervisor Cluster and Tanzu Kubernetes clusters. It is only available when using NSX-T networking for the Supervisor Cluster<sup>3</sup>

E) Assign user and groups access is not a correct option, because it is not a prerequisite for creating a vSphere Namespace, but a configuration option that can be done after creating the namespace. User and group access are used to specify the permissions for the vSphere Namespace and the workloads that run on it<sup>1</sup>

**QUESTION 44**

An administrator is creating a VMFS on FC-based VI Workload Domain.

Which two licenses must already be present in the SDDC Manager inventory? (Choose two.)

- A. VMware NSX-T Data Center
- B. VMware vSphere
- C. VMware vSAN
- D. VMware vRealize Suite Lifecycle Manager
- E. VMware Workspace ONE Access

**Correct Answer: A, B**

**Section:****Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-4EBF9094-F732-4800-86FF-30C5D88B9758.html#:~:text=You%20must%20have%20valid%20license%20keys%20for%20the%20following%20products%3A>

The two licenses that must already be present in the SDDC Manager inventory for creating a VMFS on FC-based VI workload domain are:

VMware NSX-T Data Center  
VMware vSphere

These licenses are required for the following products:

VMware NSX-T Data Center: This product provides the networking and security platform for the VI workload domain. It enables the creation of logical networks, routing, firewalling, load balancing, and other network services.

VMware vSphere: This product provides the virtualization layer for the VI workload domain. It includes the ESXi hypervisor and the vCenter Server appliance.

Prerequisites for a Workload Domain, License Keys section

About VI Workload Domains, The workflow automatically section

#### QUESTION 45

Which type of service is provided when deploying a 3-node clustered Workspace ONE Access using vRealize Suite Lifecycle Manager?

- A. Runtime Services
- B. Operations Management Services
- C. Identity and Access Management Services
- D. Automation Services

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-6904A34A-1F67-4BBA-ACE8-12F039EC97E9.html>

To provide identity and access management services to the cross-instance SDDC components, you create a global environment in vRealize Suite Lifecycle Manager in which you deploy a 3-node clustered Workspace ONE Access instance.

Workspace ONE Access is a service that provides identity and access management for the VMware Cloud Foundation environment. It enables single sign-on, multi-factor authentication, conditional access policies, and user lifecycle management for the SDDC components and workloads<sup>12</sup>

vRealize Suite Lifecycle Manager is a service that provides lifecycle management for the vRealize Suite products, such as vRealize Automation, vRealize Operations Manager, vRealize Log Insight, and Workspace ONE Access. It automates the deployment, configuration, patching, upgrading, and scaling of these products<sup>34</sup>

When you deploy a 3-node clustered Workspace ONE Access instance using vRealize Suite Lifecycle Manager, you are creating a highly available identity and access management service for your VMware Cloud Foundation environment.

#### QUESTION 46

An administrator is tasked with creating a new VMware Cloud Foundation VI workload Domain using vVols as the principal storage.

Which three storage protocols are supported for the new commissioned hosts? (Choose three.)

- A. SCSI
- B. NFS
- C. FCoE
- D. FC
- E. SAS
- F. iSCSI

**Correct Answer: B, D, F**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation<sup>1</sup>, vVols supports FC, NFS, and iSCSI storage protocol types for principal storage. These are the protocols that are supported for the new commissioned hosts that will be used for the VI workload domain.

SCSI, FCoE, and SAS are not supported storage protocols for vVols in VMware Cloud Foundation.

#### QUESTION 47

A systems administrator is tasked to deploy a management domain as part of the VMware Cloud Foundation Bring-Up process and notes the VCF components which will require at least four vCPUs.

Which VCF components have this requirement as default?

- A. NSX-T Manager and SDDC Manager
- B. SDDC Manager and vCenter Server
- C. NSX-Edge Node and NSX-T Manager
- D. vCenter Server and NSX-T Manager

**Correct Answer: D**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation<sup>1</sup>, the default CPU and memory requirements for the VCF components in the management domain are as follows:

SDDC Manager: 2 vCPUs, 16 GB RAM

vCenter Server: 4 vCPUs, 16 GB RAM

NSX-T Manager: 4 vCPUs, 16 GB RAM

NSX-Edge Node: 2 vCPUs, 8 GB RAM

Therefore, only vCenter Server and NSX-T Manager have a default requirement of at least four vCPUs.

#### QUESTION 48

Which two NSX-T Data Center components are present in VMware Cloud Foundation when Application Virtual Networks (AVNs) are deployed? (Choose two.)

- A. NSX Load Balancer
- B. NSX Global Manager
- C. NSX Intelligence
- D. NSX Edge Cluster
- E. NSX segments

**Correct Answer: D, E**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-admin/GUID-59E5BEE3-B157-426D-A40C-F21171586863.html>

Before you can deploy vRealize Suite components or implement the Identity and Access Management for VMware Cloud Foundation validated solution, you must deploy Application Virtual Networks in the management domain. An Application Virtual Network (AVN) is a software-defined networking concept based on NSX-T Data Center that allows the hosting of management applications on NSX segments. In NSX-T Data Center, segments are virtual layer-2 domains. You can create overlay-backed NSX segments or VLAN-backed NSX segments. Both options create two NSX segments (Region-A and X-Region) on the NSX Edge cluster deployed in the default management vSphere cluster. Those NSX segments are used when you deploy the vRealize Suite products. Region-A segments are local instance NSX segments and X-Region segments are cross-instance NSX segments.

According to the VMware Cloud Foundation documentation<sup>1</sup>, an NSX Edge cluster is a group of NSX Edge nodes that provide centralized network services such as routing, load balancing, firewall, and NAT. An NSX segment is a virtual layer-2 domain that can be either overlay-backed or VLAN-backed. AVNs are NSX segments that are used to host management applications such as vRealize Suite components.

NSX Load Balancer is not a component of NSX-T Data Center, but a service that is provided by the NSX Edge nodes. It allows you to distribute network traffic across multiple servers or virtual machines<sup>2</sup>

NSX Global Manager is not present in VMware Cloud Foundation when AVNs are deployed, because it is only available when NSX Federation is enabled. NSX Federation allows you to manage multiple NSX-T Data Center instances across different sites from a single pane of glass<sup>3</sup>

NSX Intelligence is not present in VMware Cloud Foundation when AVNs are deployed, because it is an optional feature that requires a separate license and installation. NSX Intelligence is a distributed analytics engine that provides visibility and security recommendations for the NSX-T Data Center environment<sup>4</sup>

#### QUESTION 49

Which two configurations are validated during the VMware Cloud Foundation bring-up process? (Choose two.)

- A. Network Configuration validation
- B. Network Connectivity validation
- C. Stretched Cluster validation
- D. Cloud Builder Log Configuration validation



#### E. NSX Edge validation

**Correct Answer: A, B**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation<sup>1</sup>, the following audit tasks are performed and validation results are displayed on the UI:

JSON specifications validation: Validates the completeness and correctness of the specifications of JSON.

Well-Formed JSON File: Validates JSON correctness, syntax, null values, and missing fields or components.

Password validation: Validates specified passwords. Checks for minimum length, invalid characters, and format.

ESXi host version validation: Validates ESXi version installed on the hosts and compares against the VCF-EMS manifest located in /opt/evosddc/bundle/scripts/manifest.json on the Cloud Foundation Builder VM.

Cloud Builder Readiness: Validates whether the requirements to run the Cloud Foundation Builder VM are met.

License key format: Validates format, validity, and expiry for ESX, vSAN, vCenter Server, NSX, and Log Insight license keys.

ESXi Host Readiness

Network configuration: Validates CIDR to IP address validity, IP addresses in use, gateways, invalid or missing VLANs, invalid or missing MTU, and network spec availability for all components.

Time Synchronization: Validates the time on the components is synchronized with the NTP server in the SDDC Manager.

Network Connectivity: Validates network connectivity between hosts and between hosts and other components.

Stretched Cluster validation is not a configuration that is validated during the VMware Cloud Foundation bring-up process, because it is an optional feature that can be enabled after the bring-up process is completed<sup>2</sup>

Cloud Builder Log Configuration validation is not a valid option, because there is no such configuration in the VMware Cloud Foundation bring-up process. The Cloud Builder VM generates logs that can be downloaded for troubleshooting purposes, but they are not validated during the bring-up process<sup>3</sup>

NSX Edge validation is not a configuration that is validated during the VMware Cloud Foundation bring-up process, because NSX Edge nodes are not deployed during the bring-up process. They are deployed when creating a VI workload domain or enabling Application Virtual Networks (AVNs).

#### QUESTION 50

During a VCF design workshop, the architect gathered the following customer requirements:

\* There should be two environments: PROD and DEV.

\* PROD and DEV workloads should communicate without traversing the physical network.

\* The PROD workload domain should be separate from the DEV workload domain.

\* The VCF infrastructure design should be flexible and scalable as much as possible.

How many total NSX manager cluster(s) will be deployed as part of the solution?

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

**Correct Answer: C**

**Section:**

**Explanation:**

According to the VMware Cloud Foundation documentation<sup>1</sup>, each workload domain in VCF has its own NSX Manager cluster that provides network services and security policies for the workloads in that domain. Therefore, to meet the customer requirements, the solution will have two workload domains: PROD and DEV, each with its own NSX Manager cluster. Additionally, the management domain will also have its own NSX Manager cluster that provides network services for the management components in VCF. However, this NSX Manager cluster is not counted as part of the solution, because it is deployed by default during the VCF bring-up process and cannot be used for workload domains<sup>2</sup>

A) 1 is not a correct answer, because it implies that there is only one workload domain in the solution, which does not meet the customer requirement of having separate PROD and DEV workload domains.

B) 4 is not a correct answer, because it implies that there are four workload domains in the solution, which exceeds the customer requirement of having two environments: PROD and DEV.

D) 3 is not a correct answer, because it implies that there are three workload domains in the solution, which does not match the customer requirement of having two environments: PROD and DEV.

#### QUESTION 51

An administrator is tasked with adding additional capacity to the existing VI workload domain to prepare for a requested workload migration.

Which supported storage types would the administrator configure to complete the task?

- A. vVols, SMB 3.0, VMFS on FC
- B. NFS v3, NFS v4.1, vSAN
- C. SMB 3.0, VMFS on FC, NFS v4.1
- D. NFS v2, NFS v3, vVols

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-getting-started/GUID-C68FD810-D270-43F2-AEBF-D522BA1F402B.html#:~:text=For%20each%20VI%20workload%20domain,vSphere%20maximum%20of%2064%20hosts>. You create VI workload domains to run customer workloads. For each VI workload domain, you can

choose the storage option - vSAN, NFS, vVols, or VMFS on FC.

VMware Cloud Foundation supports several storage types as principal and supplemental storage for VI workload domains. Principal storage is the initial shared storage type that is selected during the creation of a workload domain or cluster in SDDC Manager. Supplemental storage is the additional shared storage type that can be added after a cluster has been created using the vSphere Client.

The supported principal storage types for VI workload domains are:

vSAN

NFS v3

vVols (FC, iSCSI, or NFS)

The supported supplemental storage types for VI workload domains are:

vSAN

NFS v3 or v4.1

vVols (FC, iSCSI, or NFS)

VMFS on FC

iSCSI

NVMeoF/TCP

Therefore, the only option that contains only supported storage types for VI workload domains is B. NFS v3, NFS v4.1, vSAN.

For more information, please refer to the following sources:

Supported Storage Types for VMware Cloud Foundation

Managing Storage in VMware Cloud Foundation

VMWare Cloud Foundation Now Supports NVMeoF/TCP

#### QUESTION 52

An administrator is tasked with deploying a new VI Workload Domain with VMFS on FC storage.

Which type of network pool must the hosts be associated with while adding them to VCF inventory?

- A. NFS only network pool
- B. Network pool with vMotion and iSCSI
- C. vMotion only network pool
- D. iSCSI only network pool

**Correct Answer: C**

**Section:**

**Explanation:**

To create a VI workload domain with VMFS on FC storage, the hosts must be commissioned with VMFS on FC as the storage type and must be associated with a vMotion only or vMotion and NFS network pool.

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-4EBF9094-F732-4800-86FF-30C5D88B9758.html>

To deploy a VI Workload Domain with VMFS on FC storage, the hosts must be associated with a network pool that contains the vMotion network information. This is because the vMotion network is required for adding a host to the SDDC Manager inventory and for migrating workloads between hosts.

A NFS only network pool, a network pool with vMotion and iSCSI, or an iSCSI only network pool are not valid options for deploying a VI Workload Domain with VMFS on FC storage. These network pools are used for different types of storage, such as NFS, vVols on iSCSI, or vSAN.

The references are:

Network Pool Management, section "Information Required for a Network Pool"

Hosts | VMware Cloud Foundation API Reference Guide APIs, section "The hosts, if intended to be used for VMFS on FC, domain must be associated with either a NFS enabled or vMotion enabled network pool."

#### QUESTION 53

An architect is decommissioning a host from a VI Workload Domain and wants to reuse it in a VMware Cloud Foundation environment.

Which statement accurately describes this process?

- A. Use the decommission host workflow against a host with an unassigned state, and then run the commission host workflow.
- B. Use the decommission host workflow against a host with an unassigned state, re-image the host, and then run the commission host workflow.
- C. Use the decommission host workflow against a host with an assigned state, re-image the host, and then run the commission host workflow.
- D. Use the decommission host workflow against a host with an assigned state, and then run the commission host workflow.

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-2C3E06BA-7B77-4F4B-958C-1BFCB3E9CBA7.html> Removing hosts from the SDDC Manager inventory is called decommissioning. If you want to re-use a host in a different workload domain, you must decommission, re-image, and commission the host before adding it to the workload domain. The hosts that you want to decommission must not be assigned to a workload domain. If a host is assigned to a workload domain, you must remove it before you can decommission it. See Remove a Host from a vSphere Cluster in a Workload Domain.

Use the decommission host workflow against a host with an unassigned state, re-image the host, and then run the commission host workflow. According to the VMware Cloud Foundation documentation<sup>1</sup>, removing hosts from the SDDC Manager inventory is called decommissioning. If you want to re-use a host in a different workload domain, you must decommission, re-image, and commission the host before adding it to the workload domain. The hosts that you want to decommission must not be assigned to a workload domain. If a host is assigned to a workload domain, you must remove it before you can decommission it.

#### QUESTION 54

An architect is designing a new vSAN cluster to be added to an existing workload domain for a customer who is on a tight budget.

What is the minimum number of hosts required for this additional cluster?

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

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-D3C55AA8-D4B9-49D4-A26F-7A713A141251.html> Verify that there are at least three hosts available in the SDDC Manager inventory. For information on commissioning hosts.

The minimum number of hosts required for a new vSAN cluster is three, according to the VMware Cloud Foundation documentation<sup>1</sup>. This is because a vSAN cluster needs at least three hosts that contribute capacity to the cluster to form a quorum and tolerate failures. However, for best results and availability, VMware recommends adding at least four hosts to the cluster<sup>2</sup>

#### QUESTION 55

What is the correct upgrade order for VMware Cloud Foundation (VCF) components for a VI workload domain with a stretched vSAN cluster?

- A. 1. NSX-T 2. vCenter Server 3. ESXi hosts 4. vSAN Witness host
- B. 1. vCenter Server 2. NSX-T 3. ESXi hosts 4. vSAN Witness host
- C. 1. vSAN witness host 2. NSX-T 3. ESXi hosts 4. vCenter Server

D. 1. vSAN witness host 2. NSX-T 3. vCenter Server 4. ESXi hosts

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.5/vcf-lifecycle/GUID-3B41CF79-C721-4AFC-A263-0672143DF41E.html>

#### QUESTION 56

An administrator is tasked with creating a new VMware Cloud Foundation VI Workload Domain. Which statement is correct when commissioning new ESXi hosts to the SDDC Manager inventory?

- A. Hosts with vSAN storage can only be added to vSAN-based and VMFS on FC-based VI Workload domains.
- B. Hosts with VMFS on FC storage can only be added to VMFS on FC-based VI Workload domains.
- C. Hosts with vVols storage can only be added to NFS-based VI Workload domains.
- D. Hosts with NFS storage can only be added to NFS-based and VMFS on FC-based VI Workload domains.

**Correct Answer: B**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-45A77DE0-A38D-4655-85E2-BB8969C6993F.html>

According to the VMware Cloud Foundation documentation<sup>1</sup>, the host you are adding must have the same type of principal storage as the existing hosts in the vSphere cluster. For VI workload domains, the host can use vSAN, NFS, VMFS on FC, or vVols for principal storage. A host using VMFS on FC will automatically use the same VMFS on FC configuration as the other hosts in the vSphere cluster.

Hosts with vSAN storage can be added to vSAN-based VI Workload domains, but not to VMFS on FC-based VI Workload domains. Hosts with vVols storage can be added to vVols-based VI Workload domains, but not to NFS-based VI Workload domains. Hosts with NFS storage can be added to NFS-based VI Workload domains, but not to VMFS on FC-based VI Workload domains.

#### QUESTION 57

Which type of storage entity is used as the backing disks for persistent volumes in vSphere with Tanzu?

- A. Thick provisioned VMDK
- B. Raw Device Mapping (RDM)
- C. First Class Disk (FCD)
- D. Virtual Volumes (vVOLS)

**Correct Answer: C**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-vSphere/7.0/vmware-vsphere-with-tanzu/GUID-1B136277-E46C-41FC-9C8C-3E78E9B97F5C.html>

vSphere with Tanzu uses the First Class Disk (FCD) type of virtual disks to back persistent volumes. FCD, also known as Improved Virtual Disk, is a named virtual disk not associated with a VM. FCDs are identified by UUID and can be managed independently of VMs.

Thick provisioned VMDK, Raw Device Mapping (RDM), and Virtual Volumes (vVOLS) are not used as the backing disks for persistent volumes in vSphere with Tanzu.

The references are:

Using Persistent Storage in vSphere with Tanzu, section "Persistent Volume"

vSphere with Tanzu Storage, section "First Class Disk"

#### QUESTION 58

What is a valid way to replace the expiring evaluation Tanzu license for a vSphere with Tanzu cluster?

- A. 1. Connect to the SDDC Manager. 2. In the navigation pane, click Solutions. 3. Find the cluster, click "Update Workload Management license", and select the appropriate license.



- B. 1. Connect to the SDDC Manager. 2. Go to Administration > Licensing. 3. Add the license key for vSphere with Tanzu.
- C. 1. Connect to the vCenter Web Console. 2. Go to Menu > Home > Administration > Licenses 3. Click "Add New Licenses", and enter the license key.
- D. 1. Connect to the vCenter Web Console. 2. Go to "Hosts and Clusters", and right click on the cluster that supports namespace creation. 3. Click "Assign license", and select the appropriate license.

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-2F008636-F899-4309-9559-2D7F264FABD3.html>

#### QUESTION 59

Which two tools can be used to create custom ESXi ISO images when preparing for the VMware Cloud Foundation bring-up process? (Choose two.)

- A. vRealize Suite Lifecycle Manager
- B. VMware Imaging Appliance
- C. vSphere Lifecycle Manager
- D. PowerCLI
- E. SSH

**Correct Answer: C, D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-2674DA5A-8DF7-4212-A4A9-88CD798DC303.html>

<https://docs.vmware.com/en/VMware-Cloud-Foundation/5.0/vcf-admin/GUID-1B9AAE1E-7C55-4A7A-A921-9F84F248AF68.html>

#### QUESTION 60

A VMware administrator, who works for the U.S defense department, has been asked to upgrade the VMware Cloud Foundation software in a secure location. Due to security concerns, the VCF environment does not have any internet access.

The administrator can connect a laptop to the SDDC manager network but is not allowed to carry any storage media into the facility. To complete this work, the administrator has been given access to a network port where the laptop can be connected for internet access.

Which steps can the administrator follow to download the latest VCF software bundles?

- A. 1. Download the latest VCF software bundles on the laptop. 2. Copy the bundles to SDDC manager using file sharing.
- B. 1. Download all required OVAs onto the laptop. 2. Copy them to a USB drive. 3. Attach the drive to the SDDC manager appliance.
- C. 1. Copy the bundle transfer utility from SDDC manager onto the laptop. 2. Use the utility to download the latest software bundles for the upgrade. 3. Copy the bundles to SDDC manager using file sharing.
- D. 1. Download the latest bundle transfer utility from myvmware.com. 2. Use the utility to download the latest software bundles for the upgrade. 3. Copy the bundles to SDDC manager using file sharing.

**Correct Answer: D**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-Cloud-Foundation/4.3/vcf-lifecycle/GUID-8FA44ACE-8F04-47DA-845E-E0863094F7B0.html>

The administrator can follow these steps to download the latest VCF software bundles:

Download the latest bundle transfer utility from myvmware.com. This is a tool that allows you to download the bundles from the VMware depot and upload them to the SDDC Manager appliance<sup>1</sup>

Use the utility to download the latest software bundles for the upgrade. You need to specify the version to which you are upgrading and provide your VMware Customer Connect credentials. The utility will verify the file size and checksum of the downloaded bundles<sup>1</sup>

Copy the bundles to SDDC manager using file sharing. You can use SCP or SFTP to transfer the bundles from your laptop to the SDDC Manager appliance. You need to upload the manifest file first, which is a metadata file that contains information about the VMware product versions included in the release Bill of Materials<sup>1</sup>

#### QUESTION 61

A customer would like to use VCF in two new regional data centers, and they have a hard requirement to stretch layer 2 networks across the two sites. Both sites have a 130ms latency. What would be the ideal solution?

- A. VCF with NSX-T Federation
- B. VCD with NSX-T IPSEC
- C. VCF with NSX-T Bridging
- D. VCF with NSX-T Multi-Site

**Correct Answer: A**

**Section:**

**Explanation:**

<https://docs.vmware.com/en/VMware-NSX-T-Data-Center/3.2/administration/GUID-F3A0A27E-88C0-4A64-8754-33CED93985D3.html>

