

## 1Y0-A26 Citrix XenServer 6.0 Practice Exam

### Section 1: Implementing XenServer

#### 1.1

#### **Specific Task:** Configure boot storage from SAN

**Objective:** Given a scenario, determine how to configure options on the XenServer host so it boots from SAN.

1. An administrator is implementing a fully redundant boot from SAN environment in a XenServer resource pool.

What step should the administrator first complete to configure fully redundant boot from SAN?

- a. Ensure multiple paths are available on the SAN.
  - b. Enable multipathing during XenServer installation.
  - c. Configure a bonded primary management interface.
  - d. Add 'device\_mapper\_multipath=yes' to the config file.
- a.

Explanation: For a fully redundant boot from SAN environment, configure multiple paths for I/O access. The root device should have multipath support enabled. If multiple paths are available on the SAN, then multipathing can be enabled in the XenServer deployment upon installation. Citrix recommends configuring a bonded primary management interface on all of the XenServer hosts in the pool if using multipathing and the SAN supports multiple paths. To enable filesystem multipathing using PXE installation, add 'device\_mapper\_multipath=yes' to the PXE Linux configuration file.

Source: Citrix XenServer 6.0 Installation Guide

[http://docs.VMware.com/XenServer/6.0.0/1.0/en\\_gb/installation.html](http://docs.VMware.com/XenServer/6.0.0/1.0/en_gb/installation.html)

## Section 2: Managing and Maintaining Hosts

### 2.1

**Specific Task:** Upgrade or deploy patches

**Objective:** Determine which actions an administrator must take to apply updates (upgrades/patches) to XenServer hosts.

2. An administrator needs to update all of the XenServer hosts in a resource pool using XenCenter.

What are three steps that the administrator can take to update the hosts? (Choose three.)

- a. Enable HA in the pool if it is not already enabled.
- b. Download the .xsupdate file to the XenServer host.
- c. Suspend any virtual machines on each XenServer host.
- d. Shutdown any virtual machines on each XenServer host.
- e. Login to the XenCenter host as the Pool Administrator.

Answer: c.d.e.

Explanation: To update a XenServer host with XenCenter, log in to the computer with XenCenter using a user account with full access permissions, such as Pool Administrator. Empty the CD/DVD drives of any VMs to be suspended. Disable HA, if applicable. Download the update file to a known location (.xsupdate file extension) on the computer running XenCenter (not the XenServer host). If there are any VMs in the pool that need to be shut down or suspend, rather than allow XenCenter to automatically migrate, do so now. On the Tools menu, select 'Install New Update'. The Install Update wizard opens and walks the administrator through the rest of the update.

Source: Citrix XenServer 6.0 Installation Guide

[http://docs.VMd.citrix.com/XenServer/6.0.0/1.0/en\\_gb/installation.html#applying\\_hotfixes](http://docs.VMd.citrix.com/XenServer/6.0.0/1.0/en_gb/installation.html#applying_hotfixes)

## Section 3: Managing and Maintaining Virtual Machines and Templates

### 3.1

#### Specific Task: Copy a VM

**Objective:** Given a scenario in which a VM must be copied using a particular method, determine the steps necessary to copy the VM.

3. **Scenario:** An administrator is tasked with ejecting a XenServer host from a resource pool. Important data exists on the local disks of the host.

Before ejecting the host, which operation is recommended that the administrator perform?

- a. VM-copy
- b. VM-clone
- c. VM-export
- d. VM-snapshot

Answer: a.

Explanation: Do not eject a host from a resource pool if it contains important data stored on its local disks. All of the data will be erased upon ejection from the pool. To preserve this data, it is recommended to copy the VM to shared storage on the pool first using XenCenter or the xe VM-copy CLI command. The disk images are guaranteed to be full images when using VM-copy. Running VM-clone would not create a full copy but be part of a chain. Like cloning, exporting (VM-export) and importing (VM-import) a VM is a means for creating additional VMs of a certain configuration, such as, a special-purpose server configuration that is to be used many times.

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Quiesced snapshots can have a great impact on the system on which they are being taken. Snapshots with memory are best to use when upgrading or patching software, or testing a new application, but also want the option to be able to get back to the current, pre-change state (RAM) of the VM.

Source: Citrix XenServer 6.0 Administrator's Guide

[http://docs.VMware.com/XenServer/5.6.0fp1/1.0/en\\_gb/reference.html#pool\\_removal](http://docs.VMware.com/XenServer/5.6.0fp1/1.0/en_gb/reference.html#pool_removal)

## Section 4: Configuring and Managing Resource Pools

### 4.1

**Specific Task:** Create a pool and add or remove a host to or from a pool using the GUI or CLI

**Objective:** Given a scenario, determine which actions an administrator must take to add or remove a host to or from a resource pool using the CLI or GUI.

4. **Scenario:** An administrator of a small company manages and supports a single XenServer 5.0 Advanced Edition host and a single XenServer 6.0 Advanced Edition host. Both versions of XenServer are running on nearly the same hardware and the hardware for the 5.0 host is on the ACL for version 6.0. The processors are in the same family, but the model and step of the processor on the 6.0 host are newer than the 5.0 host. The administrator wants to create a resource pool using the two existing hosts with the 6.0 host being the pool master.

The administrator should upgrade the \_\_\_\_\_ to create a resource pool with the two hosts. (Select the best choice to complete the sentence.)

- a. processor of the XenServer 5.0 host and the BIOS 5.0 host.

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- b. BIOS of the XenServer 5.0 host and create a heterogeneous pool.
- c. processor of the XenServer 5.0 host and upgrade to XenServer 6.0.
- d. XenServer 5.0 host to version 6.0 and create a heterogeneous pool.

Answer: d.

Explanation: Heterogeneous resource pool creation is only available to XenServer Advanced editions and above. To upgrade to XenServer version 6.0, the version 5.0 host will first have to upgrade to 5.6 SP2, which wasn't mentioned in the correct option, but should be noted. To create a heterogeneous pool, the CPUs must be of the same vendor and must support Intel FlexMigration. The features of the older CPU must be a subset of the newer CPU. The same version of XenServer with the same hotfixes must be applied to the host joining the pool. The BIOS of both hosts should be upgraded to the newest version in all cases.

Source: Citrix XenServer 6.0 Administrator's Guide  
[http://docs.vmd.citrix.com/XenServer/6.0.0/1.0/en\\_gb/reference.html#hetpool](http://docs.vmd.citrix.com/XenServer/6.0.0/1.0/en_gb/reference.html#hetpool) and  
<http://support.citrix.com/article/CTX123491>

## **Section 5:** Installing and Configuring Provisioning Services

### **5.1**

**Specific Task:** Select PXE services options when installing Provisioning services

**Objective:** Determine which PXE service options to select when installing Provisioning services.

5. **Scenario: Scenario:** An administrator is installing Provisioning Services (PVS) for use with Citrix XenDesktop and Citrix XenApp. The administrator has configured two virtual machines on which to install PVS and the PXE service.

When the target devices boot from the network, what information will DHCP request from the PVS host?

- a. Boot file name
- b. PXEClient Identifier
- c. Boot server host name
- d. Mobile IP Home Agents

Answer: b.

Explanation: When a target device boots from the network, DHCP sends a request to the PVS host for an IP address and Scope Option settings (option 60; PXEClient identifier). The PVS host returns the information as requested. The target device sends a request to the PVS host for the bootstrap file name and location to the PXE service (options 66 and 67). The PXE service returns the information to the target device. Using TFTP, a request for the bootstrap file is sent from the target device to the PVS host. The PVS host downloads the bootstrap file to the target device and the target device boots. Option 68 (Mobile IP Home Agents) isn't needed for Provisioning Services.

Source: Technologies > Provisioning Services > Provisioning Services 6.0 > Administration > Managing Target Devices > Getting the Bootstrap File

<http://support.citrix.com/proddocs/topic/provisioning-60/pvs-technology-overview-boot-file-get.html> and

How to Add DHCP PXE Options to Microsoft DHCP Server

<http://support.citrix.com/article/CTX115094>

## Section 6: Maintaining Provisioning Services

### 6.1

**Specific Task:** Create and delete machine accounts in Active Directory

**Objective:** Determine how to create or delete a machine account in Active Directory on the Provisioning services server in a XenServer environment.

6. **Scenario:** An administrator just got done creating a new device in Provisioning Server. When the administrator boots up the newly created device for the first time they get the error “The trust relationship between this workstation and the primary domain failed”.

What should the administrator do to resolve the issue?

- a. Reset the machine account in Active Directory.
- b. Remove the machine account from Active Directory.
- c. Add the machine to Active Directory using Provisioning Services.
- d. Reset the Active Directory machine account using Provisioning Services.

Answer: c.

Explanation: The administrator forgot to create an AD account for the newly created device. AD accounts need to be created for all machines created in provisioning services. Using the PVS console will ensure that whether you choose to automate password changes or turn them off the machine will trust the domain.

Source: Technologies > Provisioning Services > Provisioning Services 6.0 > Installation > Administration > Managing vDisks > Deploying vDisks > Configuring vDisks for Deployment > Configuring vDisks for Active Directory Management

<http://support.citrix.com/proddocs/topic/provisioning-60/pvs-ad-passwords-manage.html>

## Section 7: Configuring Advanced Features

### 7.1

**Specific Task:** Determine when StorageLink would be beneficial

**Objective:** Determine when Advanced StorageLink is beneficial to a given environment based on a description of the environment.

7. **Scenario:** A senior administrator of a XenServer 6 a resource pool is configuring storage with a NetApp storage array. The senior administrator plans to configure the least complicated storage management solution for administrators that are not greatly experienced with storage configuration. The administrators should be able to create volumes and LUNs from within XenCenter. The storage repository will run XenServer and Hyper-V virtual machines.

Which storage management solution should the administrator implement?

- a. vSphere
- b. StorageLink
- c. Virt-Manager
- d. VM Storage Connect

Answer: b.

Explanation: StorageLink is integrated with XenServer 6. It provides an easy way for people not comfortable with storage configuration to create a volume and a LUN from within XenCenter. With StorageLink, XenServer interacts with the NetApp storage on the administrator's behalf to create the volume and LUN. An administrator specifies the



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options desired in the LUN and volume, such as deduplication and thin provisioning, when creating the SR in XenCenter.

Source: Citrix XenServer and NetApp Storage Best Practices, Pages 73 and 74

<http://support.citrix.com/article/CTX133921>

## Section 8: Backing Up and Restoring

### 8.1

**Specific Task:** Create a backup schedule for, run a manual backup of and restore storage repository metadata

**Objective:** Determine how to configure a backup schedule for storage repository metadata, based on a given scenario.

8. **Scenario:** A disaster occurred at a primary XenServer site. The primary site storage repository (SR) automatically replicates data to a recovery site. An administrator must take steps before failover to the recovery site. The administrator is not concerned with protecting the recovery site from disaster at this point.

What are two steps the administrator should take before failover to the recovery site? (Choose two.)

- a. Restart the virtual machines and vApps on the recovery site.
- b. Enable pool metadata replication to an SR on the recovery site.
- c. Break storage mirroring between the primary and recovery sites.
- d. Ensure the primary site's LUNs are not attached to another pool.

Answer: c.d.

Explanation: The steps to take after a primary site disaster are to break any existing storage mirrors (automatic replication to the recovery site SR) so that the recovery site has read/write access to

the shared storage. Ensure that the LUNs that VM data is being recovered from are not attached to any other pool, or corruption may occur. If the administrator wished to protect the recovery site from a disaster, pool metadata replication would be enabled to one or more SRs on the recovery site. During recovery, the VMs and vApps on the recovery site should be cleanly shut down.

Source: Citrix XenServer Workload Balancing 6.0 Administrator's Guide

[http://docs.vmd.citrix.com/XenServer/6.0.0/1.0/en\\_gb/reference.html#id1012173](http://docs.vmd.citrix.com/XenServer/6.0.0/1.0/en_gb/reference.html#id1012173)

## Section 9: Troubleshooting

### 9.1

**Specific Task:** Troubleshoot networking issues including verify speed and duplex of an interface, check that TCP ports are open, check NTP settings, check DNS settings, check router/trace route, check network statistics and errors

**Objective:** Given a description of a networking issue, determine how to resolve the issue.

9. **Scenario:** Using the xsconsole, an administrator changed the speed of an active-active NIC bond of two physical interfaces on a standalone XenServer host to 1 GB. The administrator also turned off auto-negotiation on the bond and set duplex to full. The bonded NIC's speed remained at 100 MB after the administrator made the above changes.

Which two actions could the administrator take to change the speed from 100 MB to 1 GB? (Choose two.)

- a. Un-bond the bonded interfaces.
- b. Change the NIC bond to Active-Passive.
- c. Use ethtool to make the interface changes.
- d. Restart the XenServer host with host-reboot.

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e. Using xsconsole, unplug and plug the interfaces.

Answer: d.e.

Explanation: To change the speed, duplex, and auto-negotiation on a network interface, using the xsconsole, find the physical interface where the settings are to be applied by using the command 'xe pif-list host-uuid=<host\_uuid>'. 'xe pif-list' lists all the physical interfaces. It is required to filter the interfaces by host-uuid when the correct interface needs to be identified. Bonded NICs completely subsume the underlying PIFs and one PIF represents the bond. Review current physical interface settings with 'xe pif-list uuid=<UUID of physical interface> params=all'. Set speed, duplex, and auto-negotiation using 'xe pif-param-set uuid=<UUID of physical interface> other-config:ethtool-autoneg="off" other-config:ethtool-speed="1000" other-config-duplex="full"'. Setting the speed manually requires auto-negotiation to be turned Off. Apply the setting on the interface by either using 'xe pif-unplug uuid=<UUID of physical interface>' and 'xe pif-plug uuid=<UUID of physical interface>' or restart the host using 'xe host-reboot host=<hostname>'. Ethtool can be used to make the changes, but it is not needed in this scenario since the changes were already made. There's no need to break the bond of the NICs or change to Active-Passive.

Source: How to Modify Network Speed and Duplexing  
<http://support.citrix.com/article/CTX117568>