



# VMware

**3V0-22.21N**

**Advanced Deploy VMware vSphere 7.x**

**QUESTION & ANSWERS**

## Question: 1

The security team has decided to follow the VMware-recommended best practices in the vSphere hardening guide. esxi02b:

Your first task is to create a local user in esxi02b:

\* Name: SpecialUser

\* Role: Administrator

Your second task is to ensure that SpecialUser is the ONLY user who is able to SSH into esxi02b via Putty.

Your final task is to enforce a strict lockdown on esxi02b.

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**Answer: see explanation below**

## Explanation/Reference:

Authentication and authorization govern access.vCenter Single Sign-On supports authentication, which means it determines whether a user can access vSphere components at all. Each user must also be authorized to view or manipulate vSphere objects.

vSphere supports several different authorization mechanisms, discussed in Understanding Authorization in vSphere. The focus of the information in this section is how the vCenter Server permission model works and how to perform user management tasks.

vCenter Server allows fine-grained control over authorization with permissions and roles. When you assign a permission to an object in the vCenter Server object hierarchy, you specify which user or group has which privileges on that object. To specify the privileges, you use roles, which are sets of privileges.

Initially, only the administrator user for the vCenter Single Sign-On domain, administrator@vsphere.local by default, is authorized to log in to the vCenter Server system. That user can then proceed as follows:

Add an identity source in which users and groups are defined to vCenter Single Sign-On. See the Platform Services Controller Administration documentation.

Give privileges to a user or group by selecting an object such as a virtual machine or a vCenter Server system and assigning a role on that object for the user or group.

## Question: 2

You have just deployed a new vCenter Server Appliance. Vcsa01

a. and are required to back up to configuration after deployment. To complete this task, perform an unencrypted backup of the vCenter Server Appliance using the following details:

\* Use the FTP protocol to backup the appliance

\* FTP Server Location: 172.20.10.10/

\* FTP Username: administrator

\* FTP Password: VMware1!

Note: Make sure you include the / at the end of the Server Location

**Answer: see explanation below**

## Explanation/Reference:

Prerequisites

You must have an FTP, FTPS, HTTP, HTTPS, or SCP server up and running with sufficient disk space to store the backup. Dedicate a separate folder on your server for each file-based backup.

## Procedure

In a Web browser, go to the vCenter Server Appliance Management Interface, <https://appliance-IP-address-or-FQDN:5480>.

Log in as root.

In the vCenter Server Appliance Management Interface, click Summary.

Click Backup.

The Backup Appliance Wizard opens.

Enter the backup protocol and location details.

### Option

#### Description

##### Backup protocol

Select the protocol to use to connect to your backup server. You can select FTP, FTPS, HTTP, HTTPS, or SCP.

For FTP, FTPS, HTTP, or HTTPS the path is relative to the home directory configured for the service. For SCP, the path is absolute to the remote system's root directory.

##### Backup location

Enter the server address and backup folder in which to store the backup files.

##### Port

Enter the default or custom port of the backup server.

##### User name

Enter a user name of a user with write privileges on the backup server.

##### Password

Enter the password of the user with write privileges on the backup server.

(Optional) Select **Encrypt Backup Data** to encrypt your backup file and enter a password for the encryption.

If you select to encrypt the backup data, you must use the encryption password for the restore procedure.

Click **Next**.

On the **Select parts to backup** page, review the data that is backed up by default.

(Optional) Select **Stats**, **Events**, and **Tasks** to back up additional historical data from the database.

(Optional) In the **Description** text box, enter a description of the backup and click **Next**.

On the **Ready to complete** page, review the summary information for the backup and click **Finish**.

The **Backup Progress** window opens and indicates the progress of the backup operation.

After the backup process finishes, click **OK** to close the **Backup Progress** window.

### Results

You successfully created a backup file of the vCenter Server Appliance.

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## Question: 3

A vSphere administrator has deployed a new server. The VM will have a workload which is prodApp1 to the following specifications:

- \* The VM should never have any memory contention while powered on, even if the host that it resides
- \* Configure the virtual machine for high latency sensitivity.

**Answer: see explanation below**

## Explanation/Reference:

Send us your suggestions.

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## Question: 4

A user has approached you about a virtual machine with the name infra-1 that is performing poorly on the vCenter Server vcsa01

a. In order to analyze the data offline, your team requires the esxtop data from the problem host with the following

requirements:

- \* The esxtop data must be in CSV format
- \* The data must contain 20 iterations with a delay

Once captured, copy the results CSV file from the destination datastore on the host to the Desktop of the ControlCenter VM with the filename 'esxiOlb-capture.csv'.

Note: WindSCP is installed on the Controller.

**Answer: see explanation below**

## Explanation/Reference:

Do the following before you start to troubleshoot a problem using esxtop: 1. Log on to the VMware Management Interface for the ESX Server machine in question. Refer to the online document, Logging Into the VMware Management Interface, for details. In the status monitor, under Virtual Machines, note the virtual machine IDs (or VMIDs) for all virtual machines running on the server.

Virtual Machines (6)	
HB	Display Name
	ts-eservices eroom w2k server (DON'T DELETE) Powered on   PID 7797   VMID 143
	Linux 100MB Powered off
	w2k3entopen.dsk Powered off
	supp073-VirtualCenter 1.0.0 Powered off
	Debian31 with Apache Suspended
	supp072-VirtualCenter 1.1.1 Powered on   PID 2345   VMID 142

2. Make certain you have an secure shell (SSH) client. Windows users can get a free SSH client from <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>. 3. If you have ESX Server version 2.0.x, refer to the VMware Knowledge Base Answer ID 1078 for instructions on downloading and installing the VMware performance monitoring tools, esxtop and vmkusage. ESX Server version 2.1 and higher include esxtop and vmkusage. See Using vmkusage to Isolate Performance Problems on page 6 for a description of vmkusage. Starting esxtop Perform the following steps to start and set up esxtop

1. Using a secure shell (SSH), log on to the ESX Server machine as root. 2. Enter esxtop in the SSH command line. The esxtop display appears.

```
10:09am up 22:09, 16 worlds, load average: 0.03, 0.01, 0.00, 0.00
PCPU:  3.49%,  1.95% :  2.72% used total
LCPU:  3.07%,  0.42%,  1.91%,  0.04%
MEM: 850944 managed(KB), 270336 free(KB) : 68.23% used total
SWAP: 1047552 av(KB), 0 used(KB), 1037080 free(KB) :  0.00 MB/s,  0.00 MB/s
DISK vmhba0:6:0:  0.00 r/s,  0.00 w/s,  0.00 MB/s,  0.00 MB/s
DISK vmhba0:0:0:  0.00 r/s,  7.57 w/s,  0.00 MB/s,  0.02 MB/s
NIC vnic1:  0.00 pTx/s,  14.55 pRx/s,  0.00 MbTx/s,  0.01 MbRx/s
NIC vnic0:  0.00 pTx/s,  14.55 pRx/s,  0.00 MbTx/s,  0.01 MbRx/s

VCPUID WID WTYPE %USED %READY %USED %MEM
129 129 idle 59.86 0.00 59.86 0.00
126 126 idle 50.83 0.00 50.83 0.00
131 131 idle 45.77 0.00 45.77 0.00
130 130 idle 38.14 0.00 38.14 0.00
127 127 console 2.31 0.02 2.31 0.00
142 142 vmm 2.29 0.36 2.29 35.00
143 143 vmm 0.76 0.22 0.76 15.00
132 132 helper 0.02 0.22 0.02 0.00
140 140 driver 0.00 0.00 0.00 0.00
139 139 reset 0.00 0.00 0.00 0.00
138 138 reset 0.00 0.00 0.00 0.00
137 137 helper 0.00 0.00 0.00 0.00
136 136 helper 0.00 0.00 0.00 0.00
135 135 helper 0.00 0.00 0.00 0.00
134 134 helper 0.00 0.00 0.00 0.00
133 133 helper 0.00 0.00 0.00 0.00
```

Note: The esxtop tool includes several interactive commands. To view a list of the interactive commands, enter h. 3.