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Top 30 VMware Interview Questions and Answers

1) What is VMware and what are their benefits?

VMware provides different applications and software for virtualization. VMware products are categorized into two levels, desktop applications, and Server applications.

It is useful for:

- Running multiple operating systems and applications on a single computer
- Consolidate hardware to get vastly higher productivity from fewer servers
- Save more than 50% of total cost spend on IT
- It simplifies IT management and speeds up the deployment of new applications

2) What are the different types of virtualization available?

Different types of virtualization available are

- Application virtualization
- Presentation virtualization
- Network virtualization
- Storage virtualization

3) Mention different types of server software do VMware provides?

VMware provides three different types of server software

- VMware ESX Server
- VMware ESXi Server
- VMware Server

4) Explain what is hypervisor

A hypervisor is a program that enables multiple operating systems to share a single hardware host. Each operating system has the host's processor, memory and other resources all to itself. The hypervisor controls the resources and host processor, allocating what is required for each operating system in turn and make sure that the guest operating system cannot disrupt each other.

5) Explain VMware DRS?

VMware DRS stands for Distributed Resource Scheduler; it dynamically balances resources across various host under a cluster or resource pool. It enables users to determine the rules and policies which decide how virtual machines deploy resources, and these resources should be prioritized to multiple virtual machines.



6) Explain VMware Fault Tolerance?

VMware fault tolerance is an important component of VMware vSphere, and it offers continuous access to applications by preventing data loss and downtime of virtual machines in the event of ESX server failure.

7) What is FT logging traffic?

FT logging is one of the options in VMKernel port setting which is more or less the same as enabling vmotion option in the vmkernel port.

8) Name different components used in VMware infrastructure.

Different components used in VMware infrastructure includes

- It consists of the lowest layer which acts as an ESX server host
- It also uses the virtual center server which keeps tracks of all the VM associated images

and manages it from one point

- VMWare infrastructure client, it enables the client to communicate with user's applications that are running on VMware
- Web-browser is used to access the virtual machines
- The license server is used to prepare a server which provides licensing to the applications
- Database servers are available to maintain a database

9) Explain vCloud Suite

vCloud Suite combines with multiple VMware components to give a complete set of cloud infrastructure capabilities in a single package, including virtualization, software-defined datacenter services, disaster recovery, application management, etc.

10) What are the storage and availability in vCloud Suite?

The storage and availability in vCloud Computing Suite includes

- **Storage DRS:** It place and load balance virtual machines based on storage capacity and I/O latency
- **Storage vMotion:** It employs proactive, non-disruptive storage migration to reduce virtual machine storage I/O bottlenecks and free up valuable storage capacity
- **Application HA:** It gains high availability that is bound to specific applications
- **Data Protection:** Based on EMC avamar, it deploys a back-up and recovery tool

11) What is Host Isolation in VMware HA (High Availability)?

In VMware HA, it has a mechanism to detect a host isolated from the rest of the hosts in the cluster. In simple words, it uses a heartbeat to communicate another host in the cluster. When the ESX host loses its ability to connect with other hosts in a cluster through heart-beat, then ESX host will be considered as a Host Isolation.

12) What is the difference between VMware HA and VMware FT?

VMware FT is enabled per VM basis while VMware HA is enabled per cluster

In the case of ESX host failure, virtual machines are the failed host and are re-started and powered-on the other active hosts in HA cluster. But FT-enabled virtual machines; there is no downtime. In the case of a host failure, the secondary VM will be activated, and it becomes primary and continue to run from the exact point where the primary VM is failed or left off.

13) Explain the new features available in vSphere 5?

In the latest version of vSphere 5.5, it includes

- ESXi Hypervisor enhancement

- Virtual Machine Enhancement
- VMware vCenter Server Enhancement
- vSphere storage Enhancement
- vSphere Networking Enhancements

14) What are the new features included in ESXi Hypervisor enhancement?

In ESXi Hypervisor enhancement includes

- **Hot-pluggable PCIe SSD Devices:** It supports SSDs (Solid State Disks) devices, and with a new enhancement, SSD device can be removed or added while a vSphere host is running.
- **Support for Reliable Memory Technology:** vSphere ESXi hypervisor can take advantage of new hardware; vendor enabled Reliable Memory Technology, through which a region of memory is reported from the hardware to vSphere ESXi hypervisor. It is used to enhance the placement of VMKernel and other components like initial thread and hosted. It helps to protect against memory error
- **Enhancements to CPU C-states:** A power process (C-state) is used to provide additional power savings

15) State out the difference between template and clone in VMware?

Clone

- Clone is a copy of the virtual machine
- You cannot convert back the cloned Virtual Machine
- A clone of a virtual machine can be made when the virtual machine is powered on
- A full clone is independent of parent virtual machines and does not share anything with virtual machines.
- A linked clone shares virtual disks with the parent virtual machine. It enables multiple virtual machines to use the same software installation

Template

- A template is a master copy of a virtual machine; it can be used to make many clones
- A template can be converted back to the virtual machine to update the base template
- A template cannot be edited or powered on, and are more difficult to change than the ordinary virtual machine
- When you clone a virtual machine from the template, the resulting cloned virtual machine is free of the original virtual machine
- When the virtual machine is powered on, it cannot convert the virtual machine to a template but can convert clone to template

16) What is Fault Tolerant Logging?

The communication between two ESXI host is known as Fault logging when FT is configured between them.

17) Explain vSS

vSS stands for Virtual Standard is responsible for communication of VMs hosted on a single physical host. It automatically detects a VM which wants to communicate with other VM on the same physical server.

18) Explain some features of VMware tool

- It offers a simple wizard for setting configuration
- Web browser interface
- Easy maintenance of virtual machines

19) Define the term 'VMKernel'.

VMWare Kernel is a proprietary kernel of VMware. It needs an operating system to boot and manage the kernel. A service console is being offered whenever VMWare kernel is booted.

20) What is the purpose of using Virtual Machine Port Group?

Virtual Machine port group helps for Virtual machine communication.

21) Give three reasons for using VMware Workstation

Three reasons for using VMware workstation are:

- Enables the user to run more than one operating system on a single system
- Saves the existing OS configuration in the form of virtual machines.
- Allows you to work on different OS without switching between them.

22) What are pluggable devices which can be added while Virtual Machine is running?

You can add HDDs and NIC while Virtual Machine is running.

23) What is the use of Promiscuous Mode?

Promiscuous mode is useful when you want to run a virtual machine with network sniffers helps you to capture packet of that network. Moreover, if the promiscuous mode set to accept, all the communication is visible to all the virtual machines.

24) What is Cold and Hot Migration?

When you migrate powered off or suspended, it is known as cold migration. When you migrate your running power on virtual machines, it is known as hot migration.

25) What is the primary use of port groups in data center virtualization?

You can separate the network traffic by using port groups like FT, management traffic, vMotion, etc.

26) What is Virtual Desktop Infrastructure?

Virtual Desktop Infrastructure which also known as VDI allows you to host the desktop operating system on the centralized window server in a data center. It is also known as server-based computing as it is the variation on the client-server computing model.

27) Explain the importance of snapshot in VMWare

A VMWare snapshot is a copy of a virtual machine disk file which is used to restore a VM to a specific point in time when the system fails, or system error occurs.

28) What is VVol?

Virtual Volume known as VVol is a new VM disk management feature concept introduced in vSphere 6.0. It enables array-based operation at the virtual disk level. It is automatically created when a virtual disk is created in a virtual environment.

29) Explain Cluster in VMware

Cluster in VMware is a logical grouping of multi ESXi hosts. It allows you to add or delete the host from the cluster. It also provides a feature like HA, DRS, on the cluster.

30) Disadvantages of the VMware virtualization platform

Some drawbacks of the VMware virtualization platform are:

- It requires a considerable investment to buy the resources
- High-end server needs which increase the cost.
- Different technologies are required for its implementation.

31) Can we do vMotion between two data centers?

Yes, we can do vMotion between two datacenters. However, for this VM should be powered off.

32) What is RDM?

RDM is a sort form of Raw Device Mapping. It is a file stored in VMFS volume which acts as a

proxy for a raw physical device. It allows you to store virtual machine data directly on LUN.

33) What is NFS?

NFS is a Network file system. It is a file sharing protocol which ESXI host used to communicate with the NAS device. It is a specialized store device which connects to a network and can provide file access service to ESXI hosts.