

By OnlineInterviewQuestions.com

VMware Interview Questions

The change in the tech world from a physical to a software-based virtual world has been possible with the help of VMware. VMware is a subsidiary of Dell Technologies. It acts as a leader of cloud computing technologies and virtualization. It also provides solutions in the networking fields and desktop virtualization. The consolidation of available hardware needs the virtual environment to be implemented. Subject matter experts' demands are increasing in the market each day.

To run an organization's business, there is a requirement of an experienced workforce. Finding the top talent to maintain and grow the organization, professionals are selected through technical interviews and HR process. Through the technical interviews, the professional's abilities in virtualization for a continuous business process are accessed. There is a list of **VMware interview questions** that might be asked to access the technical experience of the professional.

Q1. What is VMware and what are its pros?

VMware provides software for virtualization and different applications. VMware software products are categorized into two levels namely Desktop applications and server applications.

Pros:-

- Multiple operating systems and applications can run on the same computer. ;
- Hardware gets consolidated and it results in higher productivity from fewer servers.
- The total cost spent on IT gets reduced to fifty percent.
- Deployment of new applications become speedy and IT management gets simplified.

Q2. List different types of virtualization. Give an insight into each of them.

Different types of virtualization are

- **Application Virtualisation-** Mobility of applications get increased. It allows migration of VMs from a host to another in minimal downtime.
- **Server Virtualization-** It consolidates the physical server. Multiple operating systems can run on a single computer.
- **Network Virtualisation-** Complete reproduction of physical network into a software-defined network is provided.
- **Storage Virtualization-** Abstraction layer for physical storage resources to optimize and manage in virtual deployment is provided.

- **Desktop Virtualisation-** It provides a virtual desktop which reduces cost and increases service.

Q3. List the categorization areas of VMware that you are aware of. Tell us about one such category.

1. Hypervisor
2. Fault Tolerance
3. Virtual Networking
4. Vcenter server
5. Virtual storage(datastore)
6. New elements in vSphere six
7. Content libraries
8. vSAN
9. vApp
10. Miscellaneous

A virtualization layer that enables multiple operating systems to share a single Hardware host is called Hypervisor. The host allocates physical resources like memory, storage, CPU, etc. to the Virtual Machine or operating system. The hypervisors are of two types:-

- Hosted Hypervisor, it works as a VMware Workstation application.
- Bare-metal, it includes virtualization software i.e VMvisor, Hyper V, is directly installed into the hardware and controls all physical resources.

Q4. Name the different types of server software that are provided by VMware software.

It provides three types of server software namely:-

- VMware ESX server
- VMware ESXi server
- VMware server

Q5. Explain VMKernel and its importance.

A virtual interface between an ESXi host and virtual machine which stores VMs is called as **VMKernel**. Allocation of all the available resources of ESXi host to VMs such as memory, CPU, storage, etc is its responsibility. Special services such as vMotion, Fault Tolerance, Traffic management, NFS, and iSCSI are also controlled by it. Configuration of VMKernel port on ESXi server using a standard or distributed Vswitch makes these services accessible. VMs cannot communicate with the ESXi server without VMKernel.

Q6. Define Virtualisation.

Virtualization is defined as the process of creating virtual versions of physical components like storage devices, servers, Network Devices on a physical host. We can run multiple virtual machines on a single physical machine known as the ESXi host through this virtualization process.

Q7. Define Virtual Networking.

A network of Virtual Machines that are connected logically with each other on a physical server is called physical networking.

Q8. What is vDS and what are its benefits?

vDS stands for Virtual Distributed Switch. It acts as a single switch in the whole environment. Central provisioning, administration and monitoring of the virtual network is provided by vDS.

Q9. The maximum available standard ports per hosts are how many?

Four Thousand Ninety-Six ports are available per host either in a distributed or standard switch.

Q10. In data centre virtualization what is the main use of port groups?

The network traffic can be segregated using port groups such as FT, management traffic, vMotion, etc.

Q11. Define VLAN and its use in virtual networking.

Segmentation of IP Traffic where each segment cannot communicate with other segments without proper rules mentioned though a logical configuration on the switch port is called VLAN. Every VLAN has a proper number known as a VLAN ID.

Q12. State the main components of vCenter Server architecture.

There are three main components under vCenter Server architecture as follows:-

- **Web Client and vSphere Client:** A user interface
- **SSO:** A security domain in a virtual environment
- **vCenter Server Database:** Embedded PostgreSQL or SQL server for storing inventory, security roles, resource pools, etc.

Q13. vCenter Server and users are secured using which basic step?

vCenter server authentication using Active Directory. Users are assigned with specific roles through this method and the virtual environment can also be managed efficiently.

Q14. Define PSC and state its components.

The full form of PSC is Platform Service Controller. It was first introduced in the sixth version of VMware vSphere. The security functions of infrastructure are handled by VMware vSphere. The three main components are:-

- SSO (Single Sign-On)
- Licensing service
- CA (VMware Certificate Authority)

Q15. How many types of vCenter Server Deployments are there? Name them.

vCenter Server Deployments are of two types:-

- Embedded Deployment
- External Deployment

Q16. What information is stored in .nvram?

The information related to BIOS of a virtual machine is stored by .nvram.

Q17. How many VMware Disk types are there?

There are three VMware disk types. These are:-

- **Thick Professional Lazy Zeroes:** In this disk format, by default every virtual disk is created. When a virtual disk is created a physical space is allocated to a virtual machine. It is not possible to convert it into a thin disk.
- **Thin Provision:** An on-demand allocation of disk space to a virtual machine is provided. The disk expands in size with an increase in data size. With thin provisioning, there can be a hundred percent storage capacity utilization.
- **Thick Provision Eager Zeroes:** In VMware Fault Tolerance this disk is used. At the time of creation, all required disk space is allocated to Virtual Machine. The creation of disk formats takes lesser time in comparison to the time taken in creating virtual disks.

Q18. Tell us about the vCloud Suite storage and availability.

The vCloud Suite Computing storage and availability includes

- **Storage DRS:** Based on the I/O latency and storage capacity it places and load balance virtual machines.
- **Application HA:** Through this, the high availability bound to specific applications is gained Data Protection: It deploys a backup and recovery tool based on EVC Avamar
- **Storage vMotion:** To free up valuable storage capacity and reduce virtual machine storage I/O bottlenecks it deploys a proactive and non-disruptive storage migration.

Q19. State three reasons behind the usage of VMware Workstation.

Three reasons for using VMware Workstation are as follows:-

1. The user can use more than one operating system on a single computer.
2. You can work on different operating systems without switching between them.
3. The existing Operating System configuration is saved in the form of virtual machines.

(This is one of the basic yet very important **VMware Interview Question**)

Q20. State the properties of a clone and template in VMware.

Clone

1. It is a copy of the virtual machine.
2. The cloned virtual machine and it cannot be converted back.
3. A full clone does not share anything with virtual machines and is independent of parent virtual machines.
4. It is possible to make a clone when the virtual machine is powered on.
5. A linked clone does virtual disks sharing with parent virtual machine. Usage of same software installation for multiple virtual machines is enabled.

Template

1. The master copy of a virtual machine is called a template. Many clones can be made using clones.
2. To update the base template, the template can be converted back to the virtual machine.
3. It is more difficult to change a template than the ordinary virtual machine. It cannot be edited or powered on.
4. Cloning a virtual machine from template results into a virtual machine which is cloned and is free of the original virtual machine.
5. Virtual Machine cannot be converted to a template when it is powered on but a clone can be converted to a template.

Q21. Define Virtual Desktop Infrastructure.

The Desktop Operating System is hosted on the centralized window server in a data center through Virtual Desktop Infrastructure also known as VDS. As it is a variation on the client-server computing model, it is also known as server-based computing.

Q22. VMware Virtualization Platform has some disadvantages. State them.

VMware Virtualization Platform has the following drawbacks:-

- A considerable investment for buying the resources is required
- Increase in cost due to high-end server needs.
- Implementation requires different set of technologies.

Q23. What are the features of VMware tool?

- A simple wizard is provided for setting configuration.
- Web browser interface
- Virtual Machines are easily maintained

Q24. Elaborate on the types of Content Libraries have. What are the limitations of the content library?

The libraries have three types of content namely:-

- Local-It is the library of local control
- Published-It is a local library which contents ISO images, VM templates for subscription
- Subscribed-This library syncs with the public library.

A content library has some limitations:-

- It has single storage which can size a maximum of sixty-four TB.
- Each library can have a maximum of two hundred fifty-six items.
- Once every twenty-four hours syncing occurs.

Q25. Define VMware DPM.

VMware DPM stands for Distributed Power Management. It is a feature of VMware DRS. By using it resources in the cluster can be monitored. Due to the low usage when the resources are decreased, VMware Distributed Power Management shuts down the host which are not being used, consolidates workload. It automatically powers on the unused hosts when resources get increased.

Q26. Define share, limit.

Share- is defined as a value specifying the relative importance or priority of a VM access to a given resource.

Limit- As the host memory or CPU cycle reaches its limit of consumption which cannot cross the defined value.

Q27. What is HCL?

The full form of HCL is Hyper-Converged Infrastructure. The virtualization of all the elements of conventional “Hardware defined systems” is done by software-defined IT infrastructure known as Hyper-Converged Infrastructure. Virtualized computing a hypervisor, a virtualized SAN (software-defined storage) and virtualized networking (software-defined networking) are all included in HCL. The components management is done by the software only. Thus HCL simply binds storage, server, and network in a single hardware.

Q28. List the license editions available in vSphere 6.7.

The editions available in vSphere 6.7 are mentioned below :

- vSphere Platinum
- vSphere with Operations Manager Enterprise Plus
- vSphere Enterprise Plus
- vSphere Standard

There are options available for a smaller environment

- vSphere Essentials kit
- vSphere Essentials Plus kit

There are options available for Branch office and Remote offices as well :

- vSphere Remote Office Branch Office Standard
- vSphere Remote Office Branch Office Advanced

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