

VMWARE INTERVIEW QUESTIONS

01.WHAT IS VMWARE AND WHAT ARE THEIR USES?

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

It is useful for :-

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

02.WHAT IS HA?

VMware HA delivers the availability needed by many applications running in virtual machines, independent of the operating system and application running in it. VMware HA provides uniform, cost-effective failover protection against hardware and operating system failures within your virtualized IT environment.

- Monitors virtual machines to detect operating system and hardware failures.
- Restarts virtual machines on other physical servers in the resource pool without manual intervention when server failure is detected.
- Protects applications from operating system failures by automatically restarting virtual machines when an operating system failure is detected.

03.WHAT ARE THE DIFFERENT TYPES OF SERVER SOFTWARE DOES VMWARE PROVIDES?

VMware provides three different types of server software

1. VMware ESX Server
2. VMware ESXi Server
3. VMware Server

04.TO RESTART WEBACCESS SERVICE ON VMWARE

service vmware-webaccess restart – this will restart apache tomcat app

05.TO RESTART SSH SERVICE ON VMWARE

service sshd restart

06.TO RESTART HOST AGENT(VMWARE-HOSTD) ON VMWARE ESX SERVER

service mgmt-vmware restart

PATH FOR THE STRUTS-CONFIG.XML

/usr/lib/vmware/webAccess/tomcat/apache-tomcat-5.5.17/webapps/ui/WEB-INF/

TO START THE SCRIPTED INSTALL THE COMMAND IS

esx ks=nfs:111.222.333.444:/data/KS.config ksdevice=eth0
location device name

VIRTUAL NETWORK IN SIMPLE.....

Virtual Nic(s) on Virtual Machine(s) --->

Physical Nic on the ESX Server (Virtual Switch – 56 Ports) --->

Physical Switch Port Should be trunked with all the VLANS to which the VM's need access

All the ESX servers should be configured with Same number of Physical Nics (vSwitches) and Connectivity also should be same, So that vMotion succeeds

All the Virtual Machines are connected to one vSwitch with Different VLANS, this means the Physical Nic(vSwitch) needs to be trunked with the same VLANS on the Physical Switch Port

WHAT ARE THE THREE PORT GROUPS PRESENT IN ESX SERVER NETWORKING

1. Virtual Machine Port Group – Used for Virtual Machine Network
2. Service Console Port Group – Used for Service Console Communications
3. VMKernel Port Group – Used for VMotion, iSCSI, NFS Communications

WHAT IS THE USE OF A PORT GROUP?

The port group segregates the type of communication.

WHAT ARE THE TYPE OF COMMUNICATIONS WHICH REQUIRES AN IP ADDRESS FOR SURE ?

Service Console and *VMKernel* (VMotion and iSCSI), these communications does not happen without an ip address (Whether it is a single or dedicated)

IN THE ESX SERVER LICENSING FEATURES VMOTION LICENSE IS SHOWING AS NOT USED, WHY?

Even though the license box is selected, it shows as “License Not Used” until, you enable the VMotion option for specific vSwitch

HOW THE VIRTUAL MACHINE PORT GROUP COMMUNICATION WORKS ?

All the vm’s which are configured in VM Port Group are able to connect to the physical machines on the network. So this port group enables communication between vSwitch and Physical Switch to connect vm’s to Physical Machine’s

WHAT IS A VLAN ?

A VLAN is a logical configuration on the switch port to segment the IP Traffic. For this to happen, the port must be trunked with the correct VLAN ID.

DOES THE VSWITCHES SUPPORT VLAN TAGGING? WHY?

Yes, The vSwitches support VLAN Tagging, otherwise if the virtual machines in an esx host are connected to different VLANS, we need to install a separate physical nic (vSwitch) for every VLAN. That is the reason vmware included the VLAN tagging for vSwitches. So every vSwitch supports upto 1016 ports, and BTW they can support 1016 VLANS if needed, but an ESX server doesn’t

WHAT IS PROMISCUOUS MODE ON VSWITCH ? WHAT HAPPENS IF IT SETS TO ACCEPT?

If the promiscuous mode set to Accept, all the communication is visible to all the virtual machines, in other words all the packets are sent to all the ports on vSwitch

If the promiscuous mode set to Reject, the packets are sent to inteded port, so that the intended virtual machine was able to see the communication.

WHAT IS MAC ADDRESS CHANGES ? WHAT HAPPENS IF IT IS SET TO ACCEPT ?

When we create a virtual machine the configuration wizard generates a MAC address for that machine, you can see it in the .vmx (VM Config) file. If it doesn’t matches with the MAC address in the OS this setting does not allow incoming traffic to the VM. So by setting Reject Option both MAC addresses will be remains same, and the incoming traffic will be allowed to the VM.

WHAT IS FORGED TRANSMITS ? WHAT HAPPENS IF IT IS SET TO ACCEPT ?

When we create a virtual machine the configuration wizard generates a MAC address for that machine, you can see it in the .vmx (VM Config) file. If it doesn’t matches with the MAC address in the OS this setting does not allow outgoing traffic from the VM. So by setting Reject Option both MAC addresses will be remains same, and the outgoing traffic will be allowed from the VM.

WHAT ARE THE CORE SERVICES OF VC ?

VM provisioning , Task Scheduling and Event Logging

21. Can we do vMotion between two datacenters ? If possible how it will be?

Yes we can do vMotion between two datacenters, but the mandatory requirement is the VM should be powered off.

22. What is VC agent? and what service it is corresponded to? What are the minimum req's for VC agent installation ?

VC agent is an agent installed on ESX server which enables communication between VC and ESX server. The daemon associated with it is called vmware-hostd , and the service which corresponds to it is called as mgmt-vmware, in the event of VC agent failure just restart the service by typing the following command at the service console

” service mgmt-vmware restart ”

VC agent installed on the ESX server when we add it to the VC, so at the time of installation if you are getting an error like ” VC Agent service failed to install “, check the /Opt size whether it is sufficient or not.

23. How can you edit VI Client Settings and VC Server Settings ?

Click Edit Menu on VC and Select Client Settings to change VI settings

Click Administration Menu on VC and Select VC Management Server Configuration to Change VC Settings

24. What are the files that make a Virtual Machine ?

.vmtx – Virtual Machine Configuration File

.nvram – Virtual Machine BIOS

.vmdk – Virtual Machine Disk file

.vswp – Virtual Machine Swap File

.vmxsd – Virtual Machine Snapshot Database

.vmxsn – Virtual Machine Snapshot file

.vmxss – Virtual Machine Suspended State file

.vmware.log – Current Log File

.vmware-#.log – Old Log file

25. What are the devices that can be added while the virtual Machine running

In VI 3.5 we can add Hard Disk and NIC's while the machine running.

In vSphere 4.0 we can add Memory and Processor along with HDD and NIC's while the machine running

26. How to set the time delay for BIOS screen for a Virtual Machine?

Right Click on VM, select edit settings, choose options tab and select boot option, set the delay how much you want.

27. What is a template ?

We can convert a VM into Template, and it cannot be powered on once its changed to template. This is used to quick provisioning of VM's.

23. What to do to customize the windows virtual machine clone,?

copy the sysprep files to Virtual center directory on the server, so that the wizard will take the advantage of it.

24. What to do to customize the linux/unix virtual machine clone,?

VC itself includes the customization tools, as these operating systems are available as open source.

25. Does cloning from template happens between two datacenters ?

Yes.. it can, if the template in one datacenter, we can deploy the vm from that template in another datacenter without any problem.

26. What are the common issues with snapshots? What stops from taking a snapshot and how to fix it ?

If you configure the VM with Mapped LUN's, then the snapshot failed. If it is mapped as virtual then we can take a snapshot of it.

If you configure the VM with Mapped LUN's as physical, you need to remove it to take a snapshot.

27. What are the settings that are taken into to consideration when we initiate a snapshot ?

Virtual Machine Configuration (What hardware is attached to it)

State of the Virtual Machine Hard Disk file (To revert back if needed)

State of the Virtual Machine Memory (if it is powered on)

28. What are the requirements for Converting a Physical machine to VM ?

An agent needs to be installed on the Physical machine

VI client needs to be installed with Converter Plug-in

A server to import/export virtual machines

29. What is VMWare consolidated backup ?

It is a backup framework, that supports 3rd party utilities to take backups of ESX servers and Virtual Machines. Its not a backup service.

30. To open the guided consolidation tool, what are the user requirements ?

The user must be member of administrator, The user should have “Logon as service” privileges – To give a user these privileges, open local sec policy, select Logon as service policy and add the user the user should have read access to AD to send queries

31. Explain the physical topology of Virtual Infrastructure 3 Data Centre?

a typical VMware Infrastructure data center consists of basic physical building blocks such as x86 computing servers, storage networks and arrays, IP networks, a management server and desktop clients.

32. How do you configure Clusters, Hosts, and Resource Pools in VI3?

A cluster is a group of servers working together closely as a single server, to provide high availability, load balancing and high performance. A host is a single x86 computing server with individual computing and memory resources. Resource pools are allocation of the available resources in to pieces for the proper distribution.

33. What are resource pools & what’s the advantage of implementing them?

A VMware ESX Resource pool is a pool of CPU and memory resources. Inside the pool, resources are allocated based on the CPU and memory shares that are defined. This pool can have associated access control and permissions. Clear management of resources to the virtual machines.

34. Explain why VMware ESX Server is preferred over Virtual Server or Workstation for enterprise implementation?

For better resource management as it has a virtualization layer involved in its kernel, which communicates with the hardware directly.

35. In what different scenarios or methods can you manage a VI3 ?

Using the Virtual Infrastructure Client we can manage one esx server, using virtual center we can manage more than 1 esx server.. and also we can use service console to manage it.

http://searchvmware.techtarget.com/tip/0,289483,sid179_gci1280576_mem1,00.html

36. Explain the difference between access through Virtual Infrastructure Client (vi client), Web access, Service Console access(ssh) ?

Using VI Client we can access the ESX server as well as Virtual Center Server also, here we can use unix

type of authentication or windows type authentication. But to access the service console, we should use unix type of authentication preferably even though we can access the service console through ad authentication using esxcfg-auth, but it does not support all functions to work on, all the functions are available only with root account which is based on red hat Linux kernel. Using the web access also we can manage virtual center as well as a single host. But all the enterprise features are not supported.

Console access to the Service Console

The disadvantages to this mode are

you must be at the console (or connect using an IP KVM) and

you must know Linux to accomplish your task (no GUI).

SSH to the Service Console

You can SSH to the console prompt of an ESX server and receive the same Linux text console access as I showed above. Telnet is not allowed. To use this method, the ESX server must be working on the network and you must have an SSH client on your PC to connect. Again, in this mode, you don't get a GUI interface.

VMware Virtual Infrastructure (VI) Web Access to the ESX Server

This is the VMware VI Web Access interface. The benefit to using this is that you get a GUI client for your ESX server without having to install a client on your local machine. The downside to the web interface is that you can only perform basic ESX functions like controlling existing machines (start/stop/pause) and console remote access. You cannot add new VMs, work with VM storage, or VM networks. Still, this is a great interface if you just need to check the status of your ESX VMs, restart a VM, or use console remote control.

VMware Virtual Infrastructure Client (VI Client) to the Server

The benefits to the VI client are that you have full access to do whatever is needed on the ESX Server and you get a GUI client to do it in. The only downside is that you must install the VI client application to do this. However, the installation is negligible and the VI client is the absolute best way to administer your ESX Server.

VMware Virtual Infrastructure Client (VI Client) to the Virtual Center Server (VC Server)

From this VI VC interface, you can manage all ESX servers, VM storage, VM networks, and more. Virtual Center, of course, is an optional product that requires additional licenses and hardware.

37. Explain advantages or features of VMware Virtual Machine File System (VMFS) ?

It's a clustered file system, excellent support for sharing between ESX servers in a cluster.

Features

Allows access by multiple ESX Servers at the same time by implementing per-file locking. SCSI Reservations are only implemented when LUN meta data is updated (e.g. file name change, file size change, etc.)

Add or delete an ESX Server from a VMware VMFS volume without disrupting other ESX Server hosts.

LVM allows for adaptive block sizing and addressing for growing files allows you to increase a VMFS volume on the fly (by spanning multiple VMFS volumes)

With ESX/ESXi4 VMFS volumes also can be expanded using LUN expansion

Optimize your virtual machine I/O with adjustable volume, disk, file and block sizes.

Recover virtual machines faster and more reliably in the event of server failure with Distributed journaling.

Limitations

Can be shared with up to 32 ESX Servers.

Can support LUNs with max size of 2TB and a max VMFS size of 64 TB as of version 4 (vSphere).

“There is a VMFS-3 limitation where each tree of linked clones can only be run on 8 ESX servers. For instance, if there is a tree of disks off the same base disk with 40 leaf nodes in the tree, all 40 leaf nodes can be simultaneously run but they can only run on up to 8 ESX hosts.”

VMFS-3 limits files to 262,144 (218) blocks, which translates to 256 GB for 1 MB block sizes (the default) up to 2 TB for 8 MB block sizes.

38. What are the types of data stores supported in ESX3.5 ?

iSCSI datastores, FC SAN datastores, Local VMFS, NAS and NFS

39. How can you configure these different types of datastores on ESX3.5 ?

If we have FC cards installed on the esx servers, by going to the storage option, we can scan for the luns.

40. What is VMware Consolidate Backup (VCB) ? Explain your work exposure in this area ?

VMware Consolidated Backup is a backup framework, which enables 3rd party tools to take backups.

VCB is used to help you backup your VMware ESX virtual servers. Essentially, VCB is a “backup proxy server”. It is not backup software. If you use VCB, you still need backup software. It is commonly installed on its own dedicated Windows physical server.

Here are the benefits of VMware’s VCB:

Centralize backups of VMware ESX Virtual Servers

Provide file-level backups of VMware ESX Virtual Servers – both full and incremental (file level backup available to only Windows guests)

Provide image-level backups

Prevent you from having to load a backup agent on every Virtual Machine

Prevent you from having to shutdown Virtual Machines to get a backup

Provides LAN-Free backup because the VCB server is connected to the SAN through your fibre channel adaptor

Provides centralized storage of Virtual Server backups on the VCB server, that is then moved to your backup tapes through the 3rd party backup agent you install

Reduces the load on the VMware ESX servers by not having to load a 3rd party backup agent on either the VMware ESX service console or on each virtual machine.

Utilizes VMware Snapshots

Basically, here is how VCB works:

If you are doing a file level backup, VCB does a snapshot of the VM, mounts the snapshot, and allows you to backup that mounted “drive” through VCB to your 3rd party backup software

If you are doing an image level backup of the VM, VCB does a snapshot of the VM, copies the snapshot to the VCB server, unsnaps the VM, and allows you to backup the copied snapshot image with your 3rd party backup software.

41. How do you configure VMware Virtual Centre Management Server for HA & DRS ? What are the conditions to be satisfied for this setup?

HA & DRS are the properties of a Cluster. A Cluster can be created only when more than one host added, in that case we need to configure HA & DRS as well to provide High Availability and Load balancing between hosts and for the virtual machines.

42.Explain your work related to below terms :

VM Provisioning: Virtual Machine Creation.Alarms & Event Management: Alarms are used to know the status of the resource usage for a VM. Events are used monitor the tasks that are taken place on the esx servers or in the virtual center Task Scheduler: Task scheduler, if you want to schedule a task it will be

used, for example if you want move one vm from one host to another host or if you want shutdown/reboot a vm etc.

Hardware Compatibility List: what are the hardware that compatible with ESX OS.

43. What SAN or NAS boxes have you configured VMware with ? How did you do that ?

Storage team will provide the LUN information, with that we will add those LUNs to ESX hosts from VM storage.

44. What kind of applications or setups you have on you Virtual Machines ?

Exchange server and Share Point, but these are for DEMO purposes, Citrix presentation servers etc.

45. Have you ever faced ESX server crashing and Virtual Centre Server crash? How do you know the cause of these crashes in these cases ?

Please send me the answer if anyone knows about this, I will update the doc. charan@isupportyou.net

46. Will HA work if Virtual Center Server is down ?

A1) HA continues to work if VC is down – the agents are initially configured by virtual center, but HA operations are controlled by local agents on ESX. VC does NOT monitor the ESX servers for HA. ESX servers monitor each other.

DRS do not work while VC is down.

A2) For DRS, the config and logic is completely in VC.

For HA, only the config is in VC. The logic is in the service consoles, and that's where the reaction is coming from. VC will notice the HA reaction afterwards when it connects to the service consoles the next time.

No, Why because all these features are comes with Virtual Center only.

47. What are the situations which triggers vMotion automatically?

Resource Contention between virtual machines (DRS)

Distributed power management

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net



48. What is DRS/HA/DPM/dvSwitch/FT/vApps/vSafe/vShields ?

DRS : Distributed Resource Scheduling

HA : High Availability

DPM : Distributed Power Management

dvSwitch : Distribute vSwitch – It's a new feature introduced in vSphere4.0

FT : Fault Tolerance for Virtual Machines – it's a new feature introduced in vSphere4.0

vApps : vApp is a container same as resource pool, but it is having some features of virtual machines, a vApp can be powered on or powered off, and it can be cloned too.

<http://communities.vmware.com/message/1308457#1308457>

vmSafe : VMsafe's application programming interfaces are designed to help third-party vendors create virtualization security products that better secure VMware ESX, vShield Zones is a security tool targets the VMware administrator.

vShield : VShield Zones is essentially a virtual firewall designed to protect VMs and analyze virtual network traffic. This three-part series describes vShield Zones, explains how to install it and provides useful management tips. To begin, let's get started with the basics: what vShield Zones is and how it works.

http://searchvmware.techtarget.com/tip/0,289483,sid179_gci1363051_mem1,00.html

49. What are the requirement for FT ?

<http://communities.vmware.com/thread/209955>

50. What are the differences between ESX and ESXi ?

ESX is an OS with full features of virtualization, ESXi is a limited features OS with 32MB image.

51. 64-bit hypervisor – Although not everyone realized it, the hypervisor in ESX Server 3.5 was 32-bit. As a result, ESX Server 3.5 couldn't take full advantage of today's more powerful 64-bit hardware platforms. ESX Server 4.0 uses a native 64-bit hypervisor that provides significant performance and scalability enhancements over the previous versions. However, the new hypervisor does require a 64-bit hardware platform.

52. Increased VM scalability – ESX Server 4.0's new 64-bit architecture provides significant increases in scalability. ESX Server 4.0 supports virtual machines (VMs) with up to 255GB of RAM per VM. In addition, the vSphere 4.0 Enterprise Plus edition provides support for up to 8-way virtual SMP per VM. The other editions support up to 4-way virtual SMP. These gains are available on both Windows and Linux guests.

53. Hot add CPU, RAM, and virtual disks – This important enhancement in vSphere 4.0 is designed to create a dynamic IT infrastructure through the ability to add CPU, RAM, and virtual disks to a running VM. The hot add capability lets you dynamically increase your VMs' performance during periods of high resource demands.

54. Thin provisioning – This feature is nothing new to Microsoft virtualization users; vSphere now offers a thin-provisioning feature that's essentially the equivalent of Hyper-V's dynamic disks. Thin provisioning lets you create and provision a Virtual Hard Disk (VHD), but the host uses only the amount of storage that's actually required by the VM rather than using the VHD's allocated size.

55. VMware Fault Tolerance – Fault Tolerance is a new high-availability feature in vSphere 4.0. Fault Tolerance works only between two systems. It uses a technology called vLockstep to provide protection from system failure with absolutely no downtime. VMware's vLockstep technology keeps the RAM and the virtual processors of two VMs in sync at the instruction level.

56. vNetwork Distributed Switch—vSphere 4.0's vNetwork Distributed Switch lets you create and share network configurations between multiple servers. The vNetwork Distributed Switch spans multiple ESX Server hosts, letting you configure and manage virtual networks at the cluster level. It also lets you move network configuration and state with a VM when the VM is live migrated between ESX Server hosts.

57. IPv6 support – Another enhancement in vSphere 4.0 is support for IPv6. Many organizations are planning to move to IPv6. vSphere's IPv6 support lets customers manage vCenter Server and ESX Server hosts in mixed IPv4/IPv6 network environments.

58. vApps—vApps essentially lets you manage as a single entity multiple servers that comprise an n-tiered application. Using vApps, you can combine multiple VMs, their interdependencies, and their resource allocations together as a unit. You can manage all the components of the vApps as a single unit, letting you power off, clone, and deploy all the vApps components in the same operations.

59. vSphere Host Update Utility—The new vSphere Host Update Utility lets you centrally update your ESXi and ESX Server 3.0 and later hosts to ESX Server 4.0. The UI displays the status of the remote updates in real time.

60. VMware vShield Zones—VMware's new vShield Zones let customers enforce network access protection between VMs running in the virtual data center. The vShield Zones feature lets you isolate, bridge, and firewall traffic across vCenter deployments.

61. Which are the traffic shaping options available to configure?

62. What is promiscuous mode ?

If the promiscuous mode is enabled for a switch, the traffic sent that switch will be visible to all vm's connected to that switch. I mean, the data will be broadcasted.

63. What makes iSCSI and FC different ?

Addressing Scheme, iSCSI relies on IP and FC not, and the type of transfer of data also. In FC the data transferred as blocks, in iSCSI the data transferred as files. The cabling also, FC uses Fibre cable and iSCSI uses RJ45.

64. What is the format for iSCSI addressing ?

IP Address

65. VM's Task Manager shows performance normal, But vCenter reports high resource utilization, what is the reason ?

Search KEY WORDS : VM's performance normal, vCenter reports high resource utilization
<http://communities.vmware.com/message/897975>

66. What are the different types of memory management tricks available under ESX ?

<http://en.wordpress.com/tag/esx-memory-management/>

<http://www.cs.northwestern.edu/~fabianb/classes/cs-443-s05/ESX.pps>

67. What is vmmemctl ?

http://pubs.vmware.com/vi3/resmgmt/wwhelp/wwhimpl/common/html/wwhelp.htm?context=resgmt&file=vc_advanced_mgmt.11.24.html

68. How we can list pNICs & status using command line ?

ifconfig -a

69. What is resource pool ? What are the use of it ?

A resource pool is a logical abstraction for flexible management of resources. Resource pools can be grouped into hierarchies and used to hierarchically partition available CPU and memory resources.

70. Ask about how HA works.

VMware HA provides high availability for virtual machines by pooling them and the hosts they reside on into a cluster. Hosts in the cluster are monitored and in the event of a failure, the virtual machines on a failed host are restarted on alternate hosts.

71. Is HA dependent on virtual center

(Only for Install)

72. What is the Maximum Host Failure allowed in a cluster

(4)

73. How does HA know to restart a VM from a dropped Host

(storage lock will be removed from the metadata)

74. How many iSCSI targets will ESX support

8 for 3.01, (64 for 3.5)

75. How Many Fiber Channel targets

(256) (128 on Install)

76. What is Vmotion

(ability to move running vm from one host to another)

77. What is virtual SMP –

when and why should you give a vm multiple vCPUs – part of their answer should be that best practice is to start with a single vCPU because if you can run into performance issues due to CPU scheduling

78. Ask what version of Linux kernel does ESX run

if they are truly experienced they should say ESX is not Linux and does not use a Linux kernel – and give them an extra point if they explain that the service console runs a modified version of Red Hat Ent 3 –

79. Does HA use vmotion?

the answer is no – vm stops and restarts on ESX other host

80. What is the difference when you use vCenter connect to VC and directly to ESX server itself.

When you connect to VC you manage ESX server via vpxa (Agent on esx server). Vpxa then pass those request to hostd (management service on esx server). When you connect to ESX server directly, you connect to hostd (bypass vpxa). You can extend this to a troubleshooting case, where connect to esx see one thing and connect to VC see another. So the problem is most likely out of sync between hostd and vpxa, “service vmware-vpxa restart” should take care of it.

81. What was the most difficult VMWare related problem/issue you faced in a production environment and what were the specific steps you took to resolve it?

HA issues – because of dns problems, the hosts are unable to communicate together. Corrected by adding all servers ip's in each server's /etc/hosts file

VM was not powered up – because the swap file was locked by another host, when I try to power on the vm its not powering up. After releasing the lock its powered on.

82. When was the last time you called VM Support and what was the issue?

Licensing related issues.

83. What was the most performance intensive production app that you supported in VMware and what were the some of the challenges that it posed?

In exchange sharepoint demo project, getting lot of VLAN issues. (its my experience, you can say yours)

84. How would you determine that a perf intensive app is a good candidate?

Sppecifically what tools would you use to identify candidates. Specifically inside those tools what metrics would you use?

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net

85. What is yor philosophy on how much of the data center can be virtualized?

(If the interviewer wants max virtualization, but the interviewee is not convinced that this is a good idea, this could be a deal breaker)

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net

86. What is your opinion on the virtualization vendors (MS vs VM vs Citrix vs etc) and why?

(Just trying to figure out if the candidate is keeping up with this ever changing virtualization market)

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net

87. I beleive another good question would be to ask the candidate to briefly describe VST, VGT & EST mode and 802.1Q trunking. I say this because networking is such an important part of VMware implementations and on going support.., do you really want a VMware engineer working in your environment if they lack the knowledge of these concepts (+unless of course they are only delegated with low level permissions for generic VM operations+)

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net

More information on these mode's can be found here: http://www.vmware.com/pdf/esx3_vlan_wp.pdf

Also ask the candidate to explain why one mode would be used as opposed to another?, remember that there can be numerous reasons for the use of different modes depending on your company/client's network, security policies etc..

88. If you are interviewing for a consultant role it would also be a good scenario to provide a brief overview of a fictional network and ask the candidate to do a whiteboard draft of how the network would be laid out if say the ESX servers have 6 NIC's or 8 NIC's etc.. etc...

Please send me the answer if anyone knows about this; I will update the doc. charan@isupportyou.net

89. What are notable files that represent a VM?

.vmx – configuration settings for VM

.vmxf – configuration settings used to support an XML-based VM configuration API

.vmtx – configuration settings for a Template VM (replaces the .vmx file)

.vmdk – virtual disk file. (Note: if a thick disk is used, a –flat.vmdk file that represents the actual monolithic disk file will exist but will be hidden from the vSphere Client.)

.nvram – non-volatile memory (BIOS)

.vswp – swap file used by ESX/ESXi per VM to overcommit memory, i.e. use more memory than physically available. This is created by the host automatically when powering on a VM and deleted (default behavior) when powering off a VM. Swap files can remain and take up space if a host failed prior to shutting down a VM properly. Normally the swap file is stored in the location where the VM configuration files are kept; however the location can be optionally located elsewhere—for example, locally for performance reasons and if using NAS/NFS, local swap should be used.

.vmss – suspend file (if placed into suspend power mode)

.vmsd – for snapshot management

.vmsn – snapshot file

90. Host Profiles

What licensing is required for Host Profiles? Available with vSphere Enterprise Plus edition.

91. Can Host Profiles work with ESX/ESXi 3.x hosts?

No. Only starting with ESX/ESXi 4.0.

92. Can Host Profiles be used with a cluster running both ESX and ESXi hosts?

Yes, but remember to use an ESX host and not an ESXi host to create a profile for use.

In theory, Host Profiles should work with mixed host clusters, as it translates ESX to ESXi, but be careful as there are enough differences between ESX and ESXi that can lead you to make self-inflicted errors

when applying Host Profiles. The easiest method is to create clusters that are homogeneous and maintain two different profiles for these two types of clusters.

93.Can Host Profiles work when using the Cisco Nexus 1000v?

No, because Host Profiles was designed with the generic vNetwork Distributed Switch. The Cisco Nexus 1000v switch gives administrators finer-grained control of the networking beyond what Host Profiles can apply.

94. What are host profiles?

A set of best practiced configuration rules, which are can be applied to entire cluster or to an individual host. So that all the hosts in sync with each other, this will avoid vmotion, drs and ha problems.

95. What are the available Storage options for virtual machines ?

Raw device mappings, VMFS

http://searchvmware.techtarget.com/tip/0,289483,sid179_gci1318776_mem1,00.html

96.What are the differences between Virtual and Physical compatibility modes when mapping the Raw Devices to virtual machines?

You can configure RDM in two ways:

Virtual compatibility mode—this mode fully virtualizes the mapped device, which appears to the guest operating system as a virtual disk file on a VMFS volume. Virtual mode provides such benefits of VMFS as advanced file locking for data protection and use of snapshots.

Physical compatibility mode—this mode provides access to most hardware characteristics of the mapped device. VMkernel passes all SCSI commands to the device, with one exception, thereby exposing all the physical characteristics of the underlying hardware. In this mode, the mapping is done as follows, when we create a mapping, the configuration stored in a file and that file is stored with the vm files in datastore. This file points to the raw device and makes it accessible to the vm.

97.What are RDM Limitations?

RDM limitations

There are two types of RDMs: virtual compatibility mode RDMs and physical compatibility mode RDMs.

Physical mode RDMs, in particular, have some fairly significant limitations:

No VMware snapshots

No VCB support, because VCB requires VMware snapshots

No cloning VMs that use physical mode RDMs

No converting VMs that use physical mode RDMs into templates

No migrating VMs with physical mode RDMs if the migration involves copying the disk

No VMotion with physical mode RDMs

Virtual mode RDMs address some of these issues, allowing raw LUNs to be treated very much like virtual disks and enabling functionality like VMotion, snapshotting, and cloning. Virtual mode RDMs are acceptable in most cases where RDMs are required. For example, virtual mode RDMs can be used in virtual-to-virtual cluster across physical hosts. Note that physical-to-virtual clusters across boxes, though, require physical mode RDMs.

While virtual disks will work for the large majority of applications and workloads in a VI environment, the use of RDMs—either virtual mode RDMs or physical mode RDMs—can help eliminate potential compatibility issues or allow applications to run virtualized without any loss of functionality.

98. When users are logon to their Virtual Machines via View Client, when they wish to end the session, should they choose “disconnect” or “disconnect and log off” option ?

The first option is Disconnect. With Disconnect, the user remains logged on. Any programs that the user is running continue to run and no other users (except for an Administrator) can connect to this desktop. If an administrator chooses, they may log into the desktop, but will automatically log the user out and force any programs the user was running to end. The second option is Disconnect and Log off. This option allows the user to log off and it allows other users to access this desktop.

99. What is the purpose of the cache lifetime setting for the offline desktop ?

The data on each offline system is encrypted and has a cache lifetime controlled through policy, if the client loses contact with the View Connection Server, the cache lifetime is the period in which the user can continue to use the desktop before they are refused access; this countdown is reset once the connection is re-established.

100. Does Offline Desktop support tunneled or non tunneled communications ?

Offline Desktop supports tunneled or nonatunneled communications for LANabased data transfers. When tunneling is enabled, all traffic is routed through the View Connection Server.

101. Could not power on VM: no swap file

My ESXi 3.5 machine runs 8-10 VMs (Win2k3 and WinXP) normally. At the moment, 5 of them are complaining that they cannot Power On. They seem to start and then complain “Could not power on VM: no swap file”. I had a look with the data browser. It’s a small installation, so the vswp files ought to

be in the same directory as the vmx file (I did not intentionally put them anywhere else). Of course I don't see a vswp file there because the machine is not running. I don't know enough about the vmx file structure to identify if anything is wrong in the specifications. I have downloaded one of the vmx files and attached it here. Please either tell me what to change in that vmx file, or suggest another approach to get the machines to start.

filetype:**pdf**

filetype:**doc**

filetype:**txt**