VIRTUAL MACHINE

Virtual machines are software's on which other software's can be executed as they are executing on a physical machine.
There are two types of virtual machine:
1) Application/ process virtual machine.
2) System/hardware virtual machine.
1) Application/process virtual machine: In this we can take example of JVM. Because of JVM, Java is a platform independent language.
2) System/hardware virtual machine: In this we can take example of Virtual Box. Which gives as ability to run multiple of operating systems on a single physical machine. Here operating system is also a programming language which should be supported by Virtual Box.
Some advantages of Virtual Machine:

- Allows use of multiple operating system on a single physical computer interdependently.
- Easy to manage and maintain.

Some drawbacks of Virtual Machine:

- Not as efficient as a physical computer.
- Multiple virtual machines running on a single physical machine can deliver unstable performance.

Viva Vice on Virtual Machine

Q1. What is Virtualization?
The process of creating virtual versions of physical components i.e., Servers, Storage Devices, Network Devices on a physical host is called virtualization.

Q2. Mention what are the different types of virtualization available?

Application virtualization, Presentation virtualization, Network virtualization and Storage virtualization.

Q3. What is virtual networking?

A network of VMs running on a physical server that is connected logically with each other.

Q4. What is vSS?

vSS stands for Virtual Standard Switch which works like a physical switch, automatically detects a VM which want to communicate with other VM. It is responsible for communication of VMs hosted on a single physical host.

Q5. What is vDS?

vDS stands for Virtual Distributed Switch acts as a single switch in a whole virtual environment and is responsible to provide central provisioning, administration, and monitoring of the virtual network.

Q6. What is datastore?

Datastore is a storage location where virtual machine files are stored and accessed.

Q7. What is the .vmx file?

It is the configuration file of a Virtual Machine.

Q8. What information .nvram file stores?

It stores BIOS related information of a VM.

MCQs on Virtual Machine

Q1. Which of the following is another name for system virtual machine ?

a) hardware virtual machine

b) software virtual machine

c) None of the mentioned

Q2. Which of the following provide system resource access to virtual machines ?

a) VMM

b) VMC

c) All of the mentioned

Q3. Your colleague has accidentally allocated more vRAM than your company are licensed for. What will happen to your virtual machines?

a) All VM's will be Powered Off

b) New VM's can not be Powered On

c) Nothing will happen

Q4. Point out the wrong statement :

a) Load balancing virtualizes systems and resources by mapping a logical address to a physical address

b) Multiple instances of various Google applications are running on different hosts

c) Google uses hardware virtualization

Q5. Point out the correct statement :

a) A virtual machine is a computer that is walled off from the physical computer that the virtual machine

is running on

b) Virtual machines provide the capability of running multiple machine instances, each with their own operating system

c) All of the mentioned

Q6. A memory reservation defines:

a) the amount of virtual machine memory that can be paged to the VM kernel swapfile

b) the amount of physical memory that is guaranteed to the VM

c) he amount of host memory reserved for the VMkernel

Q7. Which of the following formulas defines the amount of virtual machine memory that will always be composed of disk pages?

A. Memory allocated -(minus) memory limit

B. Memory limit -(minus) memory reservation

C. Memory allocated -(minus) memory available

Q8. For paying an extra level of indirection for each memory access, Virtual machine monitor maintains

a)Shadow page table

b)Stack table

c)Memory stack

Q9. Two processors running one is user process, other is operating system process, latter is called

a)Kernel process

b)Supervisor process

c)both a and b

Q10. Software that supports Virtual machines, is called

a)Virtual machine monitor

b)Hypervisor

c)both a and b

MCQs Answers

Q1. (a)

Q2. (a)

Q3. (b)

Q4. (c)

Q5. (c)

Q6. (c)

Q7. (c)

Q8. (a)

Q9. (c)

Q10. (c)

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