**my 10 exam questions part 1**

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my 10 exam questions part 1 see part 2below

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**q1 explain THE Fundamental Concepts of Hardware Virtualisation:**

ANS Hardware virtualisation involves

creating virtual machines that act like real computers with an operating system. The

hypervisor, or virtual machine monitor (VMM), manages these VMs and allocates

resources from the host hardware.

q2 explain THE Fundamental Concepts of server Virtualisation:

ANS server virtualisation involves

q3 explain THE Fundamental Concepts of application Virtualisation:

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q4 explain THE Fundamental Concepts of server

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q5 explain THE Fundamental Concepts of storage Virtualisation:

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q6 explain THE Fundamental Concepts of network Virtualisation:

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q10 explain THE Fundamental Concepts of

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my 10 examm questions part 2 see below

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Server virtualization is a key technology in modern IT infrastructure. Here are the fundamental concepts:

1. Hypervisor

Definition: A hypervisor, also known as a virtual machine monitor (VMM), is software that creates and manages virtual machines (VMs) on a host system.

Types:

Type 1 (Bare-Metal): Runs directly on the physical hardware (e.g., VMware ESXi, Microsoft Hyper-V).

Type 2 (Hosted): Runs on top of an existing operating system (e.g., VMware Workstation, Oracle VirtualBox).

2. Virtual Machines (VMs)

Definition: A VM is an emulation of a physical computer. It runs an operating system and applications just like a physical machine.

Isolation: Each VM is isolated from others, providing security and stability.

3. Host and Guest

Host: The physical machine on which the hypervisor runs.

Guest: The virtual machines running on the host.

4. Resource Allocation

CPU, Memory, Storage: Resources from the host are allocated to VMs. This can be dynamic or static.

Overcommitment: Allocating more virtual resources than the physical resources available, relying on the fact that not all VMs will use their maximum resources simultaneously.

5. Virtual Network

Virtual Switches: Software-based switches that connect VMs to each other and to the physical network.

Network Isolation: VMs can be isolated into different virtual networks for security and management purposes.

6. Storage Virtualization

Virtual Disks: VMs use virtual disks, which are files on the host that act as physical disks for the VMs.

Storage Pools: Aggregating storage resources from multiple devices into a single pool.

7. Snapshots and Cloning

Snapshots: Capturing the state of a VM at a specific point in time, allowing for rollback if needed.

Cloning: Creating an exact copy of a VM, useful for testing and development.

8. High Availability (HA) and Fault Tolerance (FT)

HA: Ensures that VMs are automatically restarted on another host in case of hardware failure.

FT: Provides continuous availability by running a secondary VM in lockstep with the primary VM.

9. Live Migration

Definition: Moving a running VM from one host to another with minimal downtime.

Use Case: Useful for load balancing and maintenance without disrupting services.

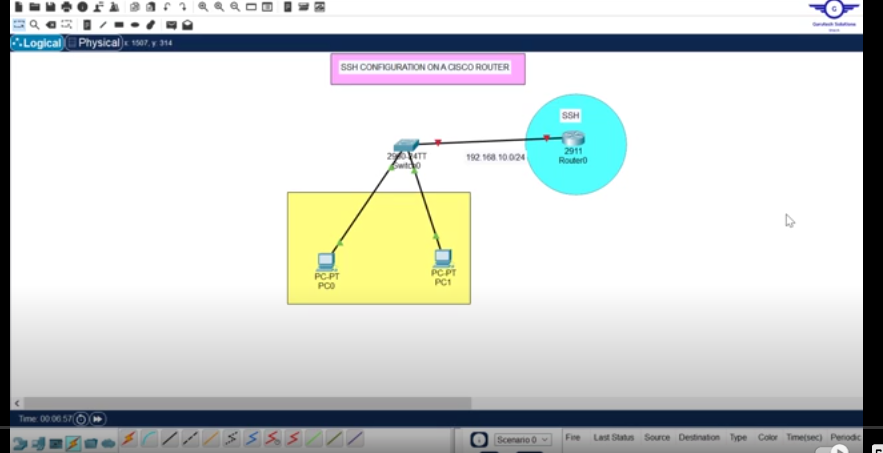
10. Management Tools

Centralized Management: Tools like VMware vCenter or Microsoft System Center manage multiple hosts and VMs from a single interface.

Automation: Scripts and tools to automate VM deployment, management, and scaling.

These concepts form the backbone of server virtualization, enabling efficient, flexible, and scalable IT environments. If you have any specific questions or need more details on any of these concepts, feel free to ask!

**Part 3 create this virtual network**

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