**Cloud Computing**

**Virtulization storage management**

Module -2

**1-What is virtualization and virtualization type?**

* Virtualization is technology that you can use to create virtual representations of servers, storage, networks, and other physical machines. Virtual software mimics the functions of physical hardware to run multiple virtual machines simultaneously on a single physical m` achine.

**2-Type of hypervisor and how to manage it?**

* There are two main hypervisor types, referred to as “Type 1” (or “bare metal”) and “Type 2” (or “hosted”). A type 1 hypervisor acts like a lightweight operating system and runs directly on the host's hardware, while a type 2 hypervisor runs as a software layer on an operating system, like other computer programs.

**3-Roles of virtualization in cloud computing?**

* Role of virtualization
* From sources across the web
* Disaster recovery
* Increased security
* Dynamic provisioning
* Resource efficiency
* Scalability
* Cost savings
* Easier management
* Enables running multiple operating systems
* Flexibility

**4-What is container?.**

* A container in computing is an **executable unit of software** that packages an application’s code along with its libraries and dependencies. [This allows the application to run consistently across various computing environments, such as desktops, traditional IT, or cloud infrastructures1](https://www.ibm.com/topics/containers). Containers are more portable and resource-efficient than virtual machines (VMs) because they virtualize the operating system rather than the entire hardware.

**5-What is high availability and live migration in virtualization?**

* Live migration is a Hyper-V feature in Windows Server. It allows you to transparently move running Virtual Machines from one Hyper-V host to another without perceived downtime. The primary benefit of live migration is flexibility; running Virtual Machines are not tied to a single host machine.

**6-Storage configuration –describe block storage, file storage and object storage---DAS NAS and SAN**

* The three systems also use different storage mechanisms: DAS primarily uses hard-drive storage with sectors, NAS uses shared files, and SAN uses block storage. Different technologies are also used for transmitting data. DAS uses IDE/SCSI, NAS uses TCP/IP and Ethernet, and SAN uses Fibre Channel and IP.

**7-Describe storage allocation and provisioning. Storage Allocation**

* Storage provisioning is the process of allocating and managing storage resources in a system. It optimizes performance, storage capacity, and operation speeds. Storage provisioning ensures that there is enough storage space when and where it is needed.