

Unit-1 - Cloud Computing Basics:

Question 1: What is Cloud Computing?

Answer

Cloud computing is a term referred to storing and accessing data over the internet. It does not store any data on the hard disk of your personal computer. In cloud computing, you can access data from a remote server.

Question 2: Define Cloud Computing Components?

Answer

Clients, the datacenter, and distributed servers, these components make up the three parts of a cloud computing solution.

Clients: clients are the devices that the end users interact with to manage their information on the cloud. Eg :Thin and Thick client

Datacenter: The datacenter is the collection of servers where the application to which you subscribe is housed. It could be a large room in the basement of your building or a room full of servers

distributed servers : Servers do not housed in same location, servers are in geographically different locations, If something were to happen at one site, causing a failure, the service would still be accessed through another site.

Question 3: What is Software plus Services?

Answer

In this model, typical SaaS is boosted with software running locally, you run some software on-site and reach out to the cloud for additional services. Example Microsoft's Business Productivity Online Suite.

Question 4: What is Database Services?

Answer

It is also called Database as a Service (DaaS) DaaS is help to avoid the complexity and cost of running your own database. A service provider that enables data access on demand to users regardless of their geographic location.

Question 5: Why Cloud Computing Matters?

Answer

1. For developers, cloud computing provides increased amounts of storage and processing power to run the applications they develop.
2. For IT departments, cloud computing offers more flexibility in computing power, often at lower costs.
3. For end users, cloud computing offers all these benefits and more.

Question 6: What is datacenter and Distributed Servers?

Answer

datacenter: The datacenter is the collection of servers where the application to which you subscribe is housed. It could be a large room in the basement of your building or a room full of servers on the other side of the world that you access via the Internet.

Distributed servers : Servers do not housed in same location, servers are in geographically different locations, If something were to happen at one site, causing a failure, the service would still be accessed through another site.

Question 7: What is Thin Client?

Answer

Thin Clients are computers that do not have internal hard drives, but rather let the server do all the work, but then display the information.

Question 8: What is Grid Computing?

Answer

Grid computing applies the resources of many computers in a network to work on a single problem at the same time. This is usually done to address a scientific or technical problem. Grid computing necessitates the use of software that can divide and then send out pieces of the program to thousands of computers. Eg: World Community Grid

Question 9: Define Full Virtualization and Paravirtualization?

Answer

Full virtualization: is a technique in which a complete installation of one machine is run on another. The result is a system in which all software running on the server is within a virtual machine.

Paravirtualization allows multiple operating systems to run on a single hardware device at the same time by more efficiently using system resources, like processors and memory.

Question 10: What is Cloud Services?

Answer

A cloud service is any service made available to users on demand via internet. A cloud service can dynamically scale to meet the needs of its users, Its delivery of computing resources like storage, database, networking, software over the internet.

Question 11: What is Software as a Service?

Answer

Software as a service is a software licensing and delivery model in which software is licensed on subscription basis and is centrally hosted. When the software is hosted off-site, the customer does not have to maintain it or support it. The provider does all the patching and upgrades as well as keeping the infrastructure running.

Question 12: What is Platform as a Service?

Answer

Platform as a Service (PaaS) is a way to build applications and have them hosted by the cloud provider. It allows you to deploy applications without having to spend the money to buy the servers on which to house them. PaaS supplies all the resources required to build applications and services completely from the Internet, without having to download or install software. PaaS services include application design, development, testing, deployment, and hosting

Question 13: What is Hardware as a Service?

Answer

Where SaaS and PaaS are providing applications to customers, HaaS does not. It simply offers the hardware so that your organization can put whatever they want onto it. Rather than purchase servers, software, racks, and having to pay for the datacenter space for them, the service provider rents those resources. HaaS allows you to rent such resources as Server space, Network equipment.

Question 14: Explain any two application of cloud Computing?

Answer

- - Cloud applications differ from compute clouds in that they utilize software applications that rely on cloud infrastructure.
 - Cloud applications are versions of Software as a Service (SaaS) and include such things as web applications that are delivered to users via a browser or application like Microsoft Online Services. Some cloud applications include-like BitTorrent and Skype, Web applications (like MySpace or YouTube)

Question 15: What is Amazons SimpleDB?

Answer Amazon offers its Amazon SimpleDB. It provides core database functions of data indexing and querying. This service works closely with Amazon Simple Storage Service (Amazon S3) and Amazon EC2. It automatically indexes data, and provides a simple storage and access.

Question 16: What is a benefits of Database as a Service?

Answer Simplicity of use : There are no servers to provision and no redundant systems to worry about. You don't have to worry about buying, installing, and maintaining hardware for the database.

Power : Depending on your vendor, you can get custom data validation to ensure accurate information. You can create and manage the database with ease.

Question 17: What is Hypervisor Applications?

Answer Applications like VMware or Microsofts Hyper-V allow you to virtualize your servers so that multiple virtual servers can run on one physical server. They also make it possible to install different operating systems on the same machine. For example, you may need Windows Vista to run one application, while another application requires Linux.

Question 18: Why is cloud computing important?

Answer *Cost savings*. In the past, it is been quite expensive to run, manage and deploy local systems; it has also taken a lot of capital.

Scalability. Cloud computing means you no longer need to worry about having to upgrade systems since it is all hosted elsewhere..

Question 19: When You Can Use Cloud Computing?

Answer

Cost/benefit ratio ,Speed of delivery,There may be times when the need you have is a perfect match for cloud computing. But there may also be times when cloud computing is simply not a good match for your needs.