

Mid Semester Assignment (spring-2020)

Cloud Computing

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Q No.1:

- a. Explain essential characteristics of cloud computing.

Ans:

- 1. Measured Service:**

Cloud computing resources are measured, and issuing organizations pay accordingly for what they use. The use of resources can be optimized depending on the application due to the influence of the lever on the load functions. This means that the use of cloud resources, whether virtual server instances or cloud storage, is monitored, measured and reported by the cloud service provider.

- 2. Resources pooling:**

The cloud company used the resources of the computer to provide services to more customers through multiple companies. Depending on customer requirements, various physical and virtual products are assigned and redistributed. The client typically has no control or information about the location of the available resources.

- 3. Easy Maintenance:**

It servers are easy to maintain and downtime is very low, and even in some cases there is no downtime. Cloud computing comes with an update every time it is gradually improved. The updates are more compatible with devices and, together with bug fixes, work faster than older ones.

4. Availability:

The cloud capabilities can be changed according to usage and can be extended a lot. It detects storage usage and allows the user to purchase additional Cloud storage if a very small amount is needed.

b. Explain in detail the key properties of cloud computing.

Ans:

1. Cloud Computing Is Accessible:

Once it data are Uploaded and stored in a server. The organization cannot store the user data in a single server they spread and store the user data on different server which are install on different location. So the user can access their data from multiple repositories. The user can access their data each and every time by providing their cloud ID.

2. Cloud Computing Is User Centric:

A user is connected to the cloud to store their data in a cloud. The data can be documents, files, applications, messages. Users have unlimited access to the data anytime, anywhere by connecting to the server. The user can also share his data. Anyone who accesses your data is part of your cloud data.

3. Cloud Computing Is Task-Centric:

We do not to be focus on the application which the application can fellow, what it do for us. It better to be focus on what we need and how the system will provide it for us. Many traditional applications like Word-processing, spreadsheet, email.

4. Cloud Computing Is Powerful:

Cloud computing servers or super computer are more powerful than the single desktop PC .Because on the server there are thousands or hundreds of users are connected it the same time and access the server data. That is why we need server and powerful computer to access and stored the user's data.

Q No. 2:

a. Explain in detail different service models of cloud computing.

Ans:

1. Software as a Service:

This model allows the use of software application as a service to end users. Software as a Service license based on membership and hosted centrally. There are many agreements between the user and service provider ensures application and data security. Most well-known organizations are using software as a service. SaaS are fully managed by the services provider. The customer must pay some amount of money by using the software application of a specific company.

2. Platform as a service:

Platform as a service are runtime environment which are provided for application or software development, deployment and also deployment tools. It provides the complete platform for development and deployment of application or web software. There is no fair about the loss of data because our data is store in a server.it provide to perform building, testing, deployment, and modification of software or application.

3. Infrastructure as a service:

It is a Service is a complete platform that the cloud computer makes available to the consumer for the fulfillment of his task. You can customize the platform to meet customer needs and needs for which the customer has to pay. The customer does not pay an additional amount of money that he does not need. Infrastructure as a Service is a kind of cloud computing that serves the user over the Internet.

b. Explain in detail different deployment models of cloud computing.

Ans:

1. Public Cloud:

The cloud which allows the system and services to be easily accessible to the general public is called public cloud. It is less secure because of its openness.

2. Private Cloud:

The Cloud which allows the system and services to be accessible within the organization is called private cloud.it is more secure than public cloud because it is access only in a specific area.

3. Hybrid Cloud:

The hybrid cloud is the combination of public and private cloud. The most critical activities or task are control and perform by the private cloud while the non-critical activities and task perform by public cloud. It shares the workload between these two clouds.

Q No. 3:

a. Explain in detail roles and boundaries in cloud?

1. Cloud Service Owner:

The person or organization legally owning a cloud service is called a cloud service owner. The owner of the cloud service can be the cloud consumer, or the cloud provider that owns the cloud where the cloud service is located.

2. Cloud Resource Administrator:

A cloud resource manager is the person or organization responsible for managing a cloud-based IT resource. The cloud resource manager can be the cloud consumer or cloud provider of the cloud in which the cloud service is located. It may be a third party organization contracted to manage the cloud-based IT resource.

3. Organizational Boundary:

An organizational boundary is the physical extent that surrounds a number of IT resources that are owned and managed by an organization. The organizational limit is not the limit of an effective organization, but only an organizational set of IT assets and IT resources. Similarly, clouds have an organizational boundary.

b. Explain in detail cloud risk and challenges?

Risk and challenges in Cloud Computing:

1. Security and Privacy of Cloud:

Cloud data storage should ensure and ensure complete confidentiality. This means that the cloud provider should take the necessary security measures to secure customer data. Securities are also the responsibility of the customer as they provide a secure password should not share the password with third parties and should change the password regularly

when we have done so. If the data is outside the firewall, problems can occur that can be resolved by the cloud provider.

2. Cost:

Cloud computing is affordable, but changing the cloud based on customer needs can sometimes be costly. This can create a bottleneck for small businesses by changing the cloud, as their demand can sometimes cost more.

3. Reliable and Flexible:

Reliability and flexibility are also one of the challenges for customers in the cloud and can prevent data from entering the cloud and the host to ensure customer reliability. To address this challenge, third-party services should be monitored and performance, robustness, and business dependency monitoring performed.

4. Downtime:

The stop time is the usual challenge in cloud computing, since no cloud provider guarantees a non-stop platform. The internet connection plays an important role because a company has a reliable internet connection. There may be a problem because it can handle the deactivation.