Mid Semester Assignment (Spring - 2020)
Cloud Computing

Name: Shahzeb Khan **ID #:** 13254

Semester: 8th **Date: 13, April, 2020**
Time: 6 days **Total Marks: 30**
Instructor: M Omer Rauf

Note: Attempt all Questions. Answers should be in your own words. Plagiarism will not be tolerated, if detected, it will lead to failure.

Question No. 1: (10)

a. Explain essential characteristics of cloud computing.
b. Explain in detail the key properties of cloud computing.

Question No. 2: (10)

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

Question No. 3: (10)

a. Explain in detail roles and boundaries in cloud.
b. Explain in detail cloud risk and challenges.

Q1 (a): Explain essential characteristics of cloud computing.

Ans 1 (a): The following are the essential characteristics of cloud computing:

- The appointed assets can be appropriated among various clients.
- Users can monitor/ control the assigned resources.
- Relegated assets can be discharged or expanded naturally.
- The client can get to the relegated assets over web through different stages. For instance PCs, mobiles, tablets and so on.

(b): Explain in detail the key properties of cloud computing.

Ans: The following are the key properties of cloud computing:

- Cloud computing is easy to understand. Clients have the entrance to their assets over web through numerous stages. i.e PC, mobiles and so forth..
- Cloud computing is objective arranged. Applications can be put away, the clients are approved to get to it, and they can essentially chip away at it, spare their undertaking and offer it with others..
- Cloud Computing as a store. As information is put away in the cloud clients can evaluate the information which isn't constrained distinctly to one single source.
- Cloud Computing includes hundred or thousands of PCs together their figuring power merits a few times of a work area PC.
- Cloud Computing is wise with different kind of information put away on PC in a cloud, the information by information mining and investigation is obliged to get to it in a smart manner

Q2 (a): Explain in detail different service models of cloud computing.

Ans: There are mainly three service models of cloud computing which are as follows:

1. Software as a service.
2. Platform as a service.
3. Infrastructure as a service.

SOFTWRAE AS A SERVICE

It is an assistance that gives on request pay per utilization of use programming to clients impossible authorized projects. It is an autonomous stage since it doesn't have to introduce the product on the PC. It runs a solitary example of the product accessible for various clients. Distributed computing is a more affordable on the grounds that the registering assets are overseen by the merchant.

PLATFROM AS A SERVICE

This administration is comprised of a programming language execution condition, a working framework, a web server and a database. The entirety of this epitomizes the

earth where clients can assembled, arrange and run their projects with no framework. This administration is essentially utilized by the designers.

INFRASTRUCTURE AS A SERVICE

This administration gives the office of PC engineering and entire framework. I.e all the registering assets, however they give it in a virtual domain with the goal that various clients can get to it. The registering assets incorporate the Disk stockpiling, virtualization, servers and systems administration. The seller will give the above registering assets yet the client will give different assets like applications, runtime and information without anyone else.

(b): Explain in detail different deployment models of cloud computing.

Ans: The following are the deployment model of cloud computing:

- Public cloud which is for open use and everybody is allowed to utilize it. It isn't the safe model of distributed computing since everybody can get to it.
- Private cloud which is utilized by a gathering of individuals approaching it. It is made sure about in light of the fact that it isn't unreservedly get to ready to everybody.
- Network cloud is utilized by numerous associations approaching it. For instance police division of a nation is sharing its information to each police headquarters in the nation.
- Hybrid cloud is the mix of private and open cloud. For instance if an online business needs all the more processing assets during occasions so he may hold open cloud else he would utilize private

Q3 (a): Explain in detail roles and boundaries of cloud computing.

Ans: The following are the roles and boundaries of cloud computing:

- The cloud supplier is liable for giving the allotted assets to the client as they have settled upon.

- A cloud client need to consent to an arrangement with the cloud gave organization so that there would be no disarray on the designated assets and cost.
- Cloud director who can deal with all the assets which are given to the clients. A cloud organization is answerable for all the exercises which happens while dispersing the assets to the clients.
- Cloud administrations proprietor there must a cloud administrations organization or a solitary individual who will be the lawfully proprietor of that cloud. The cloud administration proprietor can be the cloud customer or the cloud supplier that claims the cloud organization with in the cloud administrations dwell.

(b): Explain in detail cloud risk and challenges.

Ans: The following are some of the risks and challenges which occurs in cloud computing:

- The first test, which may happen, is the security and protection of administrations gave by the cloud to the client. So the principal thing that a distributed computing must execute is the security of the administrations that the cloud is giving, without security the clients won't trust your cloud administrations.
- Reliability and adaptability of the cloud that the client’s assets ought to be made sure about and the clients can get to it from any web gadget and the allotted assets must be given to them.
- Cost of cloud so you need to hold a reasonable cost to your cloud benefits in any case numerous little associations or clients won't have the option to utilize your administrations.
- Less assets distributed computing is confronting this test so you need to employ progressively specialized staff for the cloud organization which may assist with tackling your issues and will likewise show the other staff of the organization too.