Mid Semester Assignment (Spring - 2020)
Cloud Computing

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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)

Ans: (A) No 1 ;

characteristic of cloud computing model have since have been defined the professionals and the also the expert cloud computing is the model for enabling   presence on demand network access to shared pool of resources of the computer .

Five Essential Characteristic are given below ;

2) Rapid elasticity

1) **On- Demand self services**

3) Board network access

4) **Resources poolin**g

5) Measured services

1) On - demand self services

A consumer   can provision computing   such as services time and network storage which is needed automaticlly without human interaction between each service .

2) **Broad Network access**

Potentialities are available the network and also access through standard   mechhanisms which is pre defined they have advanced by assorted thick or thin client platforms

3) Resource pooling

In resources pooling the computational resources of provider are pooling to give an aggregate of consumer and it can utilized by multi- resources pattern with various and essential resource of dynamically that are allocate and reallocate as as the consumer requires .E.G resources will shared of computer or mobiles

4) Rapid elasticity

In rapid elasticity are potentailies can be facilitated and liberated autmatically in some senarios to scale quickly outward and inward comparable with needs .

5) Measured services

Cloud computing system controls and optimize resource automatically by using leverage an meterning are some level of abstraction different to the types of services .

B)Explain in detail the key properties of cloud computing.

Ans; (B)
Cloud computing is user centric

Cloud computing is definitely provide valuable services to end user and these are becoming next personal services and also computing devices .The user create the their environment on cloud services to store their important file and most important backups .

2) powerful

The mean of powerful that we can gather many computer to make a signal virtual personal computer and work on it with the help of cloud also can perform task is called powerful

3) Intelligent

The cloud computing is intelligent because all the data is stored or saved in cloud and also the data mining the analysis are necessary for cloud to access the data in intelligent manner

4) Task centric

On task centric is based on that what the user want and also achieve rather than achieving in particular software   the network or hardware . The user do not to buy or install anything before using   cloud services .

5) Accessible

Accessible   mean that user can   retrieve information from cloud and from multiple repositories .The data   information can be retrieved the desktop computer . It mean that the date which is saved the cloud can be accessed   from anywhere by the user .

6) Programmable

I mean that the task can necessary with cloud computing   must be automated .If the data is store in single person computer in the cloud and that PC goes offline so the cloud is programmable will be automatically redistributed the computer data to new computer in some cloud computer .

Question No. 2:   (10)

   a. **Explain in detail different service models of cloud computing.**
  Ans:A

Three type of cloud of cloud computing models

SaaS (Software as a service)
LaaS (Infrastructure as a services)
PaaS (Platform as a services)

Picking between this model need and understanding towards these models evaluating the requirement and seeking out how the select model can improvise   the intended pairs of work flows .

SaaS .
Software as a services is a model that provide quick access to cloud based web application .The developer controls the whole computing stack   through which web browser can access

SaaS does not need to installed or download in the existing computing infrastructure .The remove the need for installing application on each of the computer with the maintenance need support   taken over by the developer .

LaaS .

Infrastructure as a service basically an essential provision computing resources our the cloud .LaaS cloud provider can give the entire set of computing infrastructure .sach as network hardware including maintenance and support

Some of the LaaS cloud provider are google computing engine ,web services , azure etc .

PaaS

Platform as a service is actually cloud base through which different application for business or developed tested and organize .PaaS provide a good space for developing and testing application in run time environment .E,G AWS elastic beanstalk

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

Ans:(B) Cloud computing and cloud deployment models

The demand services on the internet like storage hosting analytic application and services etc . It allocated the companies access to a a different type of services from cloud services provider .which include the payment for everything which services is providing without spending on expensive IT infrastructure and also maintenance

Different cloud deployment models

1 Private Cloud
2 Public cloud
3 hybrid Cloud
4 Community Cloud

Private Cloud
A private cloud which is deployment model is only for single organization .Those company on side data centre is physically located on the third party provider the manger it private cloud share no resource than other organization and the company is also entirely responsible for management .

Merits

1 ; High security and privacy
2 ; customization of the cloud with more possibilities
3 ; Greater control over server

2) Public cloud

When the services are made by the third party provider over a network that is used publicly which man the software and hardware and also the network devices share the same as the other client of the same provider .

And the public cloud rents a space on the cloud from a third party provider cost and maintenance will be assume as a whole of infrastructure .

Merits

1) Cost effectiveness
Payment on scalability

Demerits

1) Lack of Customization
2) Higher security risk due to shared resources
3) Network performance can be affected

Hybrid Cloud

The combination of private and public cloud deployment model . It provides the benefits of both infrastructure to the company
The companies are capable of shifting data and application between also the public and private clouds .

Merits

1) Cost effectiveness
2) Enhanced organizagtional agility
3) Flexibility and control

Community cloud

The Community cloud is that cloud is which the infrastructure is shared in between many organization with a specific community and also the common interest . such as compliance , security etc .

Question No. 3: (10)

a. Explain in detail roles and boundaries in cloud.

Ans: The Role and Boundaries are that

1) Cloud Provider

The one who provider cloud based IT resource to the Organizational making cloud services available to cloud consumers is the responsibility to the organization which assume the role of cloud provider .The IT resources that are sold to the cloud customer on lease the cloud provider owns them .

2) Cloud Services Owner

Cloud services owner is a person to the organization that owns cloud services legally .The cloud services owner can be the cloud services owner if it launch it own cloud services for other cloud consumer are use.

3) Cloud Consumer

Cloud consumer can be organizational or human interact with the cloud services from a cloud provider and the cloud services consumer is granted to access the cloud services .

Additional Resources are different supplementary Roles

Cloud Broker

The cloud broker manages and negotiates the usage of of cloud services between cloud consumer and also cloud provider .

Cloud Carrier

Cloud Carrier provide wire level connectivity between cloud consumer and cloud provider .

Cloud Auditor

In cloud auditor the responsibilities are associated of security privacy impacts ans also performance

Organizational Boundary

The organizational boundary of cloud consumer and cloud provider is set of IT resources which is surrounded and shown physical perimeter .

Trust Boundary

The trust boundary is a part of cloud environment in which the role of cloud consumer access the cloud based IT resources .

b. Explain in detail cloud risk and challenges.

Ans: **Risk of cloud computing**

The Risk of cloud computing are given below

1) Availability risk
Availability risk are that if the server is slow there will be a chance the server is timeout and the cloud developer might lose customer

2) Business and client risk

In business risk is risk of security breaches because the server is not much secured and maintained due to which there is a chance the data lose and server might be hacked

3)Maintenance and   client risk

If the cloud storage gets corrupted there is a chance that the stored data is might lose .

Challenges of cloud computing

Portability

In requires constant internet connection which is mean that if there is a storage in electricity the server also might be disconnect

Performance

The cloud requires high speed internet connection which mean that low speed of internet the connection might be slow the server will be down .

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