Midterm Examination.

Introduction to Cloud Computing - CS360

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1. Ans

API is nothing but it called as "Application Programming Interface". It is an "interface" b/w two applications or services to communicate with one another. An API delivers user response to a system and sends the system's response back to the user. They allow capabilities of one computer program to be used by another. They allow us to share important data and expose practical business functionality b/w devices, applications and individuals.

One of the prominent examples of API is Twitter Bots. There are huge range of bots on twitter. Twitter bots are accounts that automatically tweet (or retweet), follow and send direct messages based on. software instructions. One of bots is,

netfix Bot: Tweets when new content is released on Netflix.

Tiny care Bot: Sends hourly remainder to drink water, stretch, and etc.

2. Ans

Cloud computing system is composed of a set of layers upon which application are build.

⇒ infrastructure, Platform, and software.

Based on these three layers ⇒ There are 3 ~~com~~ cloud computing models are devised.

Infrastructure as a Service (Iaas): This model provides infrastructure related services and responsible for handling hardware-related issues, power and etc. in data centres. it accomodates memory, CPU, and additional hardware resources. Amazon Web Services is pioneer Iaas. Rackspace, Terremark, Go Grid etc. are some compahies based on Iaas. Saas is delivery of computer infrastructure as a service

Platform as a Service (Paas): This model ~~of the~~ makes all of facilities required to support the complete life of building and delivering web applications and services ~~are~~ available from internet. Here service provider provides a platform to clients, enabling them to develop run and manage applications without need to build and maintain infrastructure such software process typically require.

Openshift, Apache Stratos, AT&T, Flexiscale etc. are some companies which use Paas.

Saas (Software as a Service): This is a software distribution model in which applications are hosted by vendor or service provider and made available to customers over internet. You only need a web browser to access the application, it does not required hardware purchase or software installation. it provides quick operation service. Salesforce, Dropbox, Google Apps etc. are some examples of Saas.

Iaas is cost effective, as companies of all sizes leverage the benefits, which include affordable access to enterprise-class solutions, predictable cost structures and rapid scalability. Whereas Though Saas & Paas are cheaper compared to Iaas but effectiveness matters in case of Iaas. In Iaas model uses can have full access upon hardware required.

3. Ans

Elastic compute cloud (EC2):

it is part of AWS, that allows users to rent virtual computers on which to run their own computer applications. it encourages scalable deployment of applications by providing a web services through which user can boot an Amazon machine Image to configure virtual machine, which in amazon known as 'Instance', containing any software desired. it is simple web service used for which allows us to obtain and configure capacity with minimal friction. User can on demand can rent virtual server per hour and use it to deploy his/her own applications.

S3 (Simple Storage service)

S3 is the object storage service that allows you to block public access to all of your objects at bucket or give the access. it is object storage built to store and retrieve any amount of data from anywhere.

Amazon DynamoDB

it is a key value and document database. ~~that delivers a single~~. it is a fully, ~~multi~~ managed and durable database with built in security, backup and restore, and in memory caching for internet scale applications. it is a NOSQL database it is often used for low scales operations because of its simplicity, but it can handle ultra high scale operations.

Cloud computing is simply on PAY AS YOU GO users and customers must have to pay ~~for~~ only for this way of use of cloud services.. ~~in~~ users can use software application etc. without any cost because property service remains to cloud provider, cloud ~~is~~ service components are ~~not~~ economical is false it is based on usage of users

5.
Ans

1.) Resources will be shared b/w users in traditional use whereas in cloud computing Resources delives services for every users according to their demands

2.) Cloud has better performance compared to traditional grid.

3.) In traditional way, allocation of multiple servers onto a single task or job whereas in cloud, Virtualization of servers i.e, One server for many tasks

4.) Task are single large in grid whereas small & medium in Cloud computing.

5.) Virtualization of data & computing resources in grid, whereas virtualization of hardware and software platforms.

6. Ans

The intution of Elasticity is to match the resources allocated with actual amount of resources needed at any given point in time. it is ability to rapidly and dynamically alocate cloud resources, including compute, storage and memory resrces, in reponse to changing demands Scalability handles changing needs of an application within the confines of infrastructure via statically adding or removing resources to meet applications demands if needed. as demand increases storage can be increased. These are much useful as per demand and user intrest we can updata the requirement in cloud. and this can't be done in traditional models. If demand increases the user can manage his model using these two.

for example, running & storing application. Application needs specific environment to run, including Computing power, VM's and Storage space

Because the cloud is elastic, you will be given assets needed to run that application for a website scalability can help when more and more uploads are increasing rapidly. Scalability helps to increase storage.

4. Ans

hardware and ram are consumed as resources when laas is selected.