

## Assignment 2.

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Q1) What is google app engine.

→ 1) Google App Engine (GAE) is a platform as a service product that provides web app developers & enterprises with access to Google scalable hosting & tier 1 internal service.

2) GAE requires that applications be written in Java or Python, store data in Google BigTable & use the Google query language. Non compliant applications require modification to use GAE.

3) GAE provides more infrastructure than other scalable hosting services such as Amazon Elastic Compute Cloud (EC2). GAE also eliminates some system administration & development tasks to make writing scalable applications easier.

Google provides GAE free up to a certain amount of use for the following resources.

- processors (CPU).
- Storage.
- application programming interface (API) calls.
- concurrent requests



Q2) What is windows azure?

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- 1) Windows Azure is a cloud computing platform developed by Microsoft that can be used to build & host online web applications through Microsoft data centers.
- 2) Management of the scalable web applications is also performed at Microsoft data center.
- 3) Microsoft Azure was originally codenamed "Red Dog" & was initially called "Windows Cloud" when it first launched in October 2008.
- 4) Windows Azure is designed to make IT management easier. The main purpose of developing Windows Azure was to minimize the overhead & personnel expenses associated with the creation, distribution & upgrade of the web applications.
- 5) The Windows Azure Platform is considered a platform as a service, which is an imperative component of a cloud computing platform.
- 6) It consists of various on demand services hosted in Microsoft data centers & is commoditized through ~~three~~ three product brands.



7) Windows Azure is designed to support both Microsoft & non Microsoft platforms. The three main components that constitute Windows Azure are:-

- a) Compute layer.
- b) Storage layer.
- c) Fabric layer.

8) Windows Azure also includes an automated service management feature that allows the upgrading of applications without affecting their performance.

9) Windows Azure is designed to support a number of platforms & programming languages.

10) Some of the languages supported are extensible markup language (XML), Representation state transfer (REST), Simple Object Access Protocol (SOAP), Ruby, Eclipse, Python & PHP.



Q3) Describe Amazon EC2 & its basic features.

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- 1) EC2 stands for Elastic Compute Cloud. EC2 is on demand computing service on the AWS cloud platform.
- 2) Under computing it includes all the services a computing device can offer to you along with the flexibility of a virtual environment.
- 3) It also allows the user to configure their instances as per their requirements i.e. allocate the RAM, ROM, storage according to the need of the current task.
- 4) Even the user can dismantle the virtual device once its task is completed & it is no more required.
- 5) For providing all these scalable resources AWS charges some ~~bit~~ bill amount at the end of every month, bill amount is entirely dependent on AWS your usage.
- 6) EC2 provides you to rent virtual computers.
- 7) The provision of servers on AWS cloud is one of the ~~easier~~ easiest way in EC2.
- 8) EC2 has resizable capacity.



- 9) EC2 offers ~~the~~ security, reliability, high-performance & cost-effective infrastructure so as to meet the demanding business needs.

### Features of EC2 :-

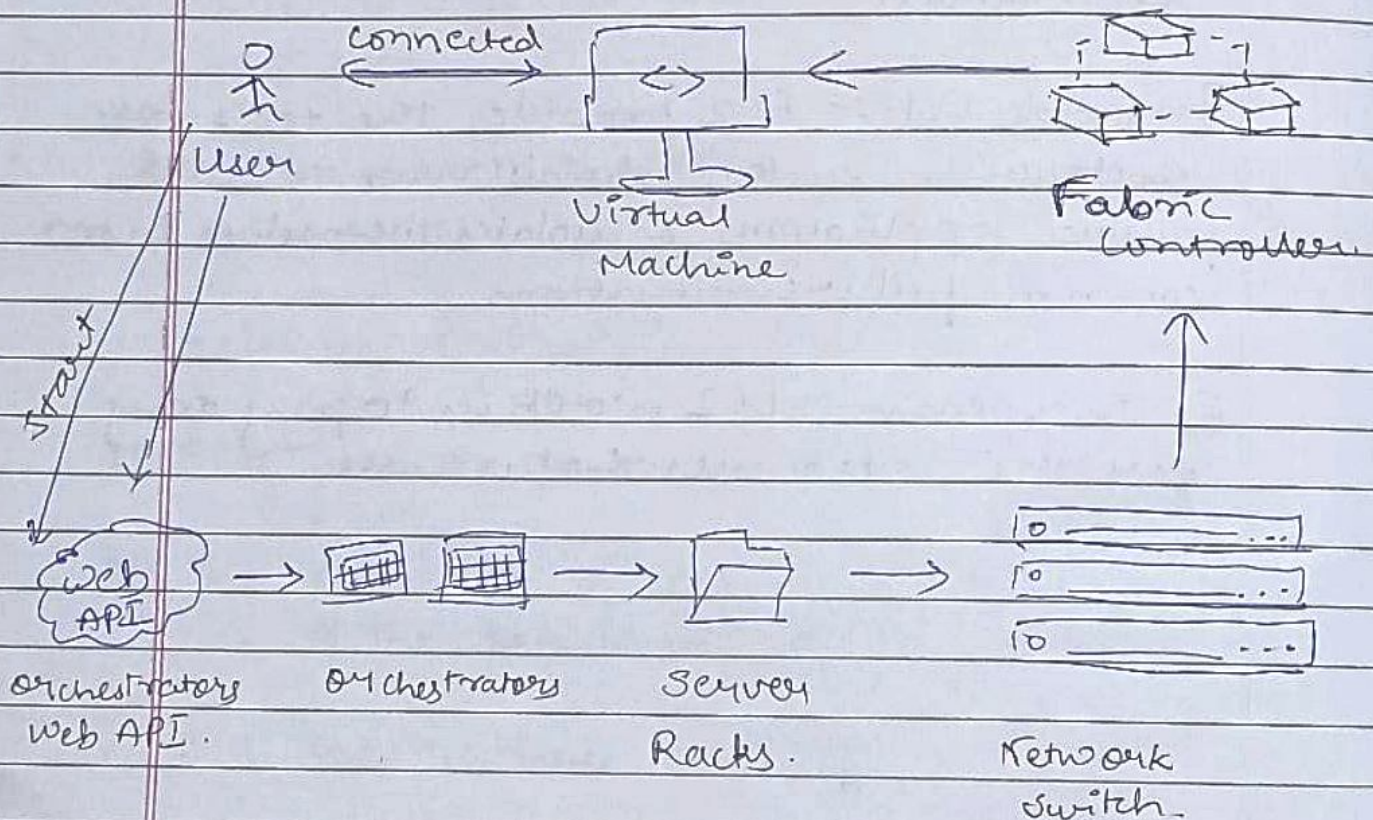
- A) Reliable :- EC2 offers a highly reliable environment where replacement of instances is rapidly possible.
- B) Designed for AWS :- EC2 works fine with Amazon services like Amazon S3, Amazon RDS, DynamoDB & SQS.
- C) Secure :- EC2 works in Amazon Virtual Private Cloud to provide a secure & Robust network to resources.
- D) Flexible Tools :- EC2 provides the tools for developers & system administrators to build failure applications & isolates themselves from common failure situations.
- E) Inexpensive :- EC2 worth us to pay only for the resources that we use.



Q4) Describe the architecture of Windows Azure.



- 1) Azure is Microsoft cloud computing platform which helps to build solutions to meet business goals.
- 2) It supports Infrastructure (IaaS), platform (PaaS) & Software (SaaS) computing services.
- 3) It supports advanced computing services like artificial intelligence, Machine Learning & IoT. Azure allows you to build, manage, & deploy the application on a global network.





- 4) Azure is a private & public cloud platform that helps developers & IT professional to build, deploy & manage the Application.
- 5) It uses the technology known as virtualization. Virtualization separates the tight computing coupling between the hardware & the OS using an abstraction layer called a hypervisor.
- 6) Azure takes the <sup>virtualizing</sup> techniques & repeats it on a massive scale in Data centers owned by Microsoft. Each data center has many racks filled with servers & each server includes the hypervisor to run multiple VMs.
- 7) The network switch provides connectivity to all these servers.
- 8) One server in each rack runs a special piece of software called fabric controller. Each fabric controller is connected to another special piece of software known as orchestrator. Each of these is responsible for managing the work like responding to user requests.



Q5 Explain SAS server with their different implementation techniques.

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- 1) SAS is a command driven <sup>design</sup> statistical software while widely used for statistical data analysis & virtualization. SAS full form is Statistical Analysis Software.
- 2) It allows you to use qualitative techniques & processes which helps you to enhance employee productivity & business profits.
- 3) When the SAS Intelligence Platform was installed at the client's site, a metadata object that represent the SAS server dies in your environment was defined.
- 4) In the SAS management console interfaces, this type of object is called a SAS Application server.
- 5) SAS Application server is not an actual server that can execute SAS code submitted by clients. Rather, it is a logical container for a set of application server components which do execute code.
- 6) For example, a SAS Application Server might contains a standard workspace server and a pooled workspace server ~~to~~ which can execute SAS code that generated by clients such as



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SAS code that generated by clients such as SAS Data Integration studio or SAS web Report studio.

- 7) SAS workspace is SAS Pooled workspace server. It represents a session with the SAS system and is functionally equivalent to the execution of the SAS system as a batch job. A pooled workspace server is a workspace server in every respect except that it automatically uses machine's server side pooling & load balancing to improve performance on larger SAS deployment.
- 8) SAS OLAP server:- Similar to how a database management system (DBMS) can read a SQL query & return data from a database, SAS OLAP server processes MDX queries & returns data from OLAP cubes.
- 9) Batch server:- is actually a metadata object. It stores a SAS command that is run at batch mode to execute SAS or Java code.
- 10) SAS Grid Server:- Is similar to the batch server in that it stores a command & the server stores the SAS command that platform use was used to start SAS/CONNECT sessions on the nodes in grid.



Q6) Describe some examples of CRM & CRP implementation based on cloud computing technologies.

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1) CRM stands for Customer Relationship Manager & is a software that is hosted in cloud so that the users can access the info using internet.

2) Microsoft Dynamic 365 is a highly collaborative cloud based CRM software that can help your sales team be more efficient in an increasingly <sup>complex</sup> environment can be used to:

- generate & send message containing automatic responses based on the customer's actions.
- customize workflows based on the requests & the needs of the company.
- target customers before setting up an emailing campaign

3) Oracle CRM is a cloud Based CRM system that simplifies customer relationship management for business of all types & sizes.

From a marketing perspective <sup>Oracle</sup> ~~Oracle~~ CRM offers mailing & emailing features, ~~master~~ marketers can use this software to develop



to execute marketing campaigns, setup workflows & carry out complete & precise analyses to have clear vision of marketing actions.