**Tutorial 3 : Cloud Infrastructure**

1. Private clouds are an alternative to public clouds. List THREE (3) examples of **open source cloud computing platforms**.

* Eucalyptus
* OpenNebula
* Nimbus
* OpenStack

1. What is **Instances** from the Amazon Web Services (**AWS**) perspective?

Instance from the Amazon Web Services (AWS) is a virtual server with a well specified set of resources including CPU cycles, main memory, secondary storage, communication and I/O bandwidth.

1. Give THREE (3) examples of **cloud services** provided by **AWS**?

* AWS Management Console
* Elastic Cloud Computing (EC2)
* Simple Queuing Service (SQS)
* Simple Storage Service (S3)
* Simple DB
* Elastic Bloc Storage (EBS)
* Cloud Watch
* Auto Scaling
* Virtual Private Cloud

1. Explain each of the services you listed in Question 3.

**AWS Management Console**

Allows users to access all the services that are offered by Amazon Web Services (AWS), but not all options are available.

**Elastic Cloud Computing (EC2)**

Allows a user to launch instances of an application with a variety of operating systems such as Linux and Microsoft Window

**Simple Queuing Service (SQS)**

Allows multiple EC2 instances to communicate with one another.

**Simple Storage Service (S3)**

Service designed to store large objects

**Simple DB**

It is a non-relational data store. This service supports store and query functions traditionally provided only by relational databases.

**Cloud Watch**

Supports performance monitoring.

**Elastic Bloc Storage (EBS)**

Provides persistent block level storage volumes for use with EC2 instances. This service is suitable for database applications, file systems, and applications using raw data devices.

**Auto Scaling**

Supports elastic resource management.

**Virtual Private Cloud**

Allows direct migration of parallel applications.

1. Describe any THREE (3) Software as a Service (**SaaS**) services offered by **Google**.

**Gmail**

Google Hosts Emails on Google servers and provides a web interface to access the Email.

**Google docs**

A web-based software for building text documents, spreadsheets and presentations.

**Google Calendar**

A browser-based scheduler which supports multiple user calendars, calendar sharing, event search, display of daily/weekly/monthly views, and so on.

**Google Groups**

Allows users to host discussion forums to create messages online or via Email.

**Picasa**

A tool to upload, share, and edit images.

**Google Maps**

Web mapping service; offers street maps, a route planner, and an urban business locator for numerous countries around the world

Iaas

Google:

* Google Compute Engine

AWS

* Amazon Web Services

Others:

* DigitalOcean
* Amazon Web Services(AWS)
* Microsoft Azure

| **Cloud Service Provider** | **Platform as a Service** | **Software as a Service** |
| --- | --- | --- |
| **Microsoft** | * Windows Azure * SQL Azure * Azure AppFabric | * Microsoft Office 365 * SharePoint Online |
| **Google** | * Google Drive * Google Base | * Google Docs * Google Maps * Google Calendar |