AWS Notes

**Amazon EC2**

Amazon Elastic compute cloud (EC2) provides scalable computing capacity in the Amazon web services (AWS)

* Eliminates our investment on hardware and makes us to focus on develop & deployment of our applications faster
* We can make EC2 to launch as many servers as we want by configuring security, networking & storage
* Depending on the traffic, we can scale up / down to handle the incoming traffic

## **Cloud Computing:**

Cloud computing is the on-demand delivery of compute power, database storage, applications and other IT resources through a cloud services platform via the internet with ‘pay-as-you-go’ pricing

* It Provides a simple way to access servers, storage, databases and a broad set of application servers over the internet
* Companies like AWS take care of all the network-connected hardware required for the User’s application services
* Advantages:
  + Trade capital expense for *variable expense* (Initial investment)
  + Benefit from massive economies of scale (pay as you go pricing adv., when started more servers)
  + Stop guessing about capacity (Scale up/down depends on the incoming traffic)
  + Increase speed and agility (Starting the boxes instantly in few minutes when in need)
  + Stop spending money running and maintaining data centers
  + Go global in minutes

Types

1. Iaas (Infrastructure as a service)
2. Paas (Platform as a service)
3. Saas (Software as a service)

Iaas (Back end – Networking, data storage (sys admin things)):

Contains the basic building blocks for cloud IT and provides access to networking features, computers (virtual or dedicated hardware) and data storage space. Mostly eliminates IT Resources management work

Paas (mid end – hardware and Operating system related things):

Paas remove the need for organizations to manage the underlying infrastructure (Usually h/w & other Operating Systems). It lets us to concentrate on the “deployment and management” of our applications

Saas (Front end – Software as a service):

Is nothing but a service provider provides you with a completed product that is run and managed by the service provider. Using Saas is nothing but referring to ‘end-user’ applications. It Just doesn’t care the underlying Infrastructure and how the service is maintained.

Cloud Computing Deployment models:

Cloud:

A Cloud based application is fully deployed in the cloud and all parts of it runs in the cloud itself. Applications in the cloud have either been created in the cloud or have been migrated from an existing infrastructure to take advantage of the cloud

Hybrid:

A Hybrid deployment is the way to connect existing infrastructure & applications between cloud-based resources and existing resources that’re not located in the cloud. This usually happens when the organization’s infrastructure is moving onto the cloud while connecting cloud resources to the internal system

On-premises:

The deployment of resources on-premises, using virtualization and resource management tools is sometimes called the ‘Private Cloud’.

## **Global Infrastructure:**

AWS cloud Infrastructure is built around ***Regions (Geographical regions)*** and ***Availability zones***.