Cloud Computing

What is Cloud Computing?

- Cloud computing is the on-demand delivery of IT resources (compute, storage, applications....) through a cloud services platform (AWS) via the internet with pay-as-you-go pricing.
- Accessing IT resources provided by cloud provider (AWS) through web.
- Three key words
  1. On – Demand (Whenever/whatever we need, we get immediately)
  2. Scalable (Increase and Decrease the configuration as per requirement)
  3. Pay only whatever you use

EC2

- EC2 is one of the famous Amazon web services by using which we can launch any number of Instances (Servers) as per our required configuration with in fraction of minutes.
- After launching Instances, we can increase and decrease the configuration as per our requirement without stopping the Instance.
- This service (EC2) we use more in companies.
- To launch an Instance, we need to select below

AMI (Amazon Machine Image):-

. AMI is simply an Operating system in AWS. AWS has provided some pre-defined Operating Systems of both windows and Linux. We have to choose OS from AWS provided list only. We can't bring any OS form outside into AWS.

Instance type:-

Here we are going to choose CPU Cores and RAM. AWS is giving them as pairs. AWS paired best possible combinations form which we get maximum performance. These pairs we call as instance types.

EBS (Elastic Block Storage):-

EBS is simply a Hard disk that we attach to Instances. We can choose any amount of hard disk. We can have any no of drives as well. In this hard disk, we can keep both Operating System as well as Objects (MP3, MP4, Pictures, Documents.....)

- When we combine above all, we will get our required configured Server. That server in AWS we call as Instance.

- Apart from above, we select many other things as well like

Tag:-

Tag is just a meaning full name that we give to EC2 Instance for identification purpose.

Security Groups:-

1. Security Groups deals with Ports.
2. Port is like a door to your Instance.
3. We have total 0 - 65535 number of ports are there. Each port will have both incoming and outgoing options.
4. All these ports are dedicated for some special purpose
5. Most Important ports are RDP (3389), SSH (22), HTTP (80) and HTTPS (443).
6. RDP port is a dedicated port for windows. If you want to access any windows server, you need to open RDP port of that server. Through that port only we can access windows server. If it is Linux, then we have to open SSH (22) Port.
7. Remaining ports will be discussed in next classes.

Key:-

Key pair is just like a password. But here it is a file. By default we get .pem (Privacy-Enhanced Mail) key. To access windows instance, we need to convert that .pem into Password. Because, windows instance supports password only.

- Best practice is after finishing work, either terminate or stop your Instance. If we stop your instance, we can start at any time. But if we terminate instance, we can't start. Termination means losing instance forever.
