# Chapter → 3



24. Write short note about Amazon Cloud Computing

Ans: Amazon Web Services (AWS) known as Amazon cloud computing. Based on Iaas model it works. They Provide Computer & storage servers interconnected by high-speed network.

25. Describe EC2.

Ans EC2 means Elastic Compute cloud. It Provides scalable computing capacity in the Amazon web services. It follows ~~zen~~ Xen virtualization strategy.

26. Describe Amazon Cloud Computing with a diagram.

Ans.

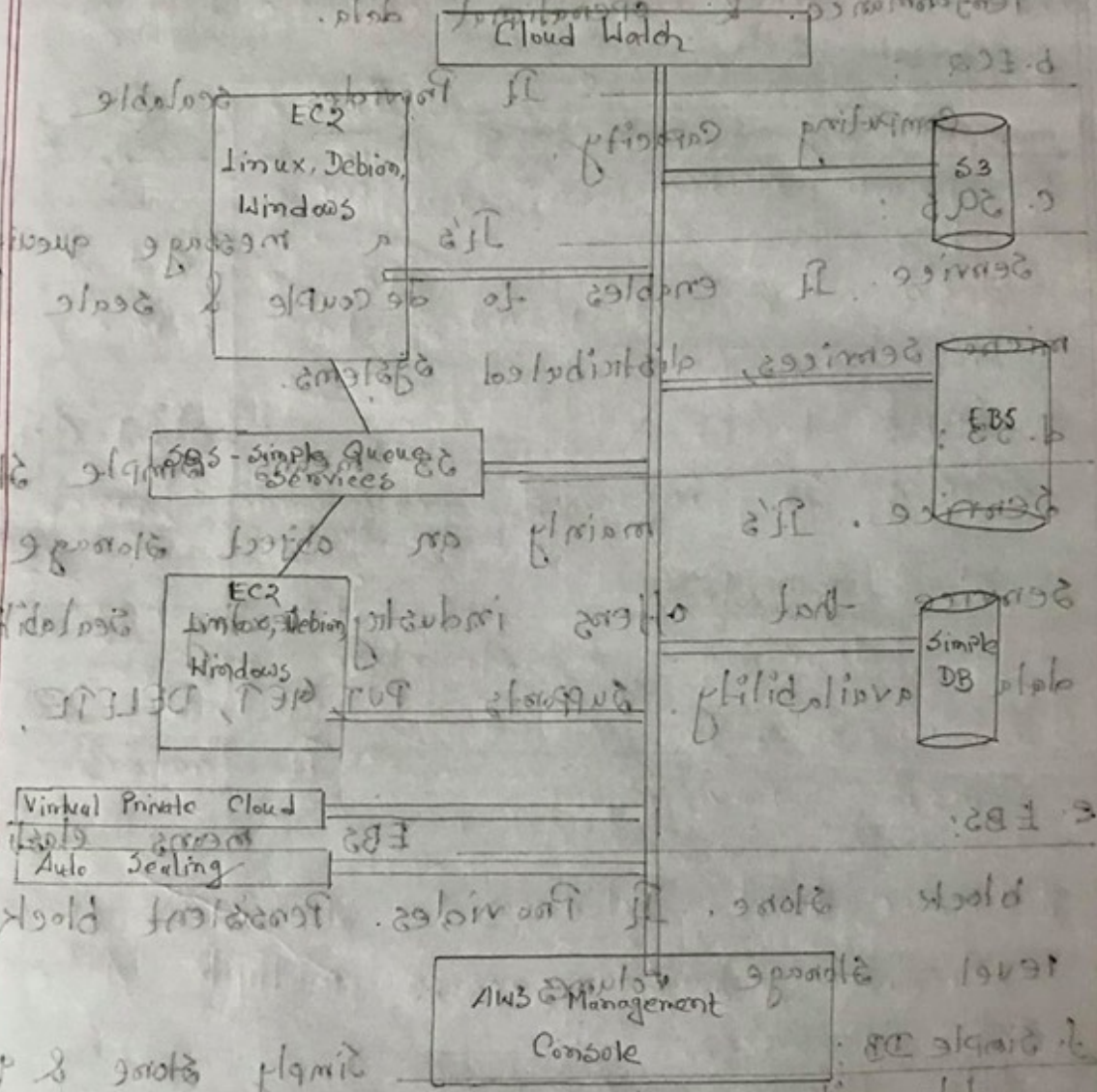


Figure: Amazon cloud Computing

a. Cloud watch: It's a monitoring & management service. It helps to access Performance & operational data.

b. EC2 : It Provides scalable computing capacity.

c. SQS : It's a message queuing service. It enables to decouple & scale micro-services, distributed systems.

d. S3 : S3 means simple Storage service. It's mainly an object storage service that offers industry leading scalability, data availability. Supports PUT, GET, DELETE.

e. EBS: EBS means elastic block store. It Provides Persistent block level storage volumes.

f. Simple DB : Simply store & query data items via web services.

g. Virtual Private cloud: On demand configurable Pool of shared computing resources.

h. Auto Scaling: Automatically monitors & adjusts compute resource.

i. AWS Management Console: Built in user interface to perform AWS tasks.

27. Draw Server Running AWS Service diagram & Describe

Ans:

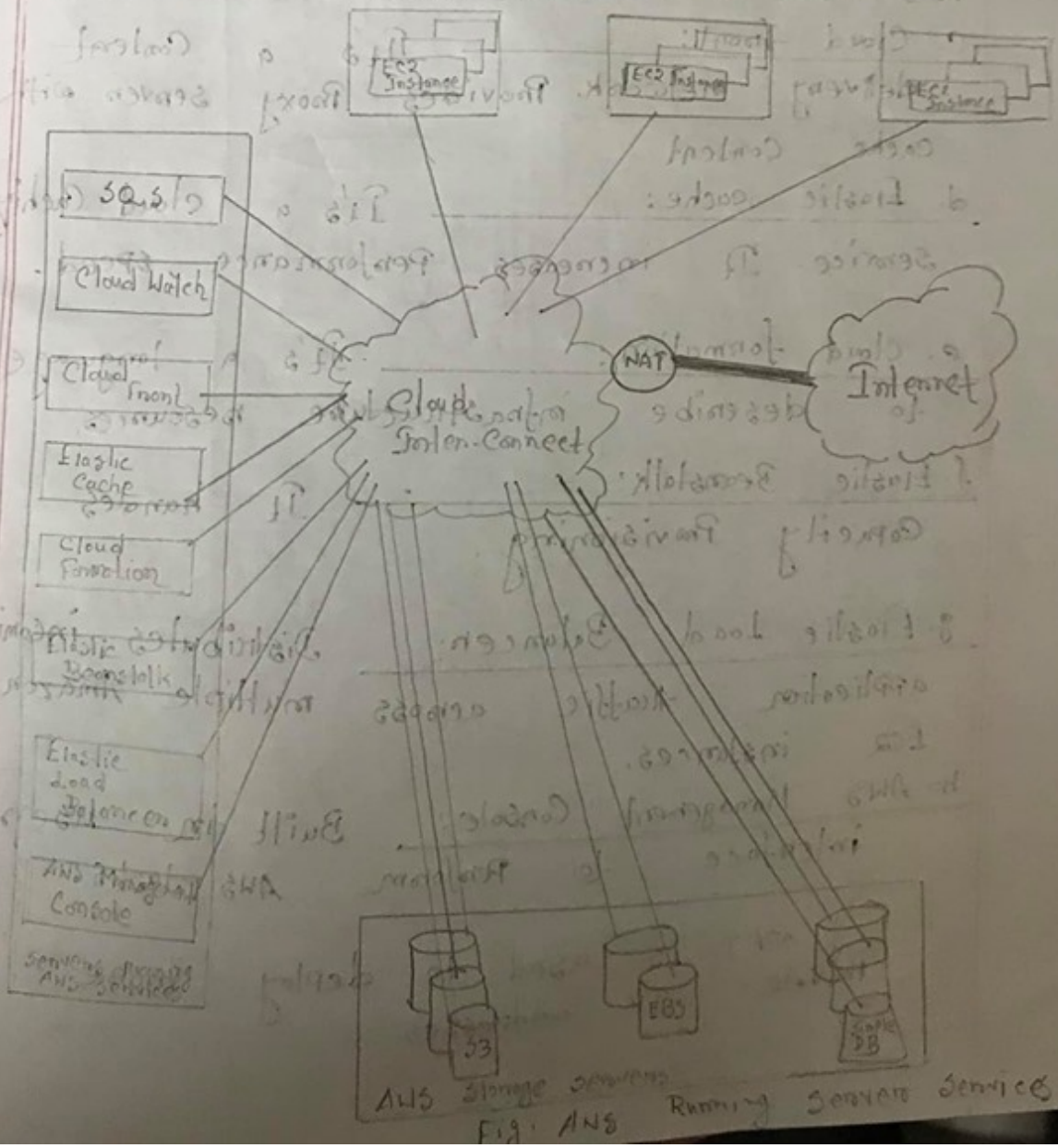


Fig: AWS Running Server Services

a. SQS: It's a message queuing service. It enables to decouple & scale micro-services, distributed systems.

b. Cloud Watch: It's a monitoring & management service. It helps to access Performance & operational data.

c. Cloud front: It's a Content delivery network. Provides Proxy server with cache content.

d. Elastic cache: It's a cloud caching service. It increases Performance, speed.

e. Cloud formation: It's a language to describe infrastructure resources.

f. Elastic Beanstalk: It handles Capacity Provisioning.

g. Elastic load Balancer: Distributes incoming application traffic across multiple Amazon EC2 instances.

h. AWS Management Console: Built in user interface to Perform AWS tasks.

NAT is used to deploy more Private IP addresses

28. Draw Google Cloud Platform model

Ans:

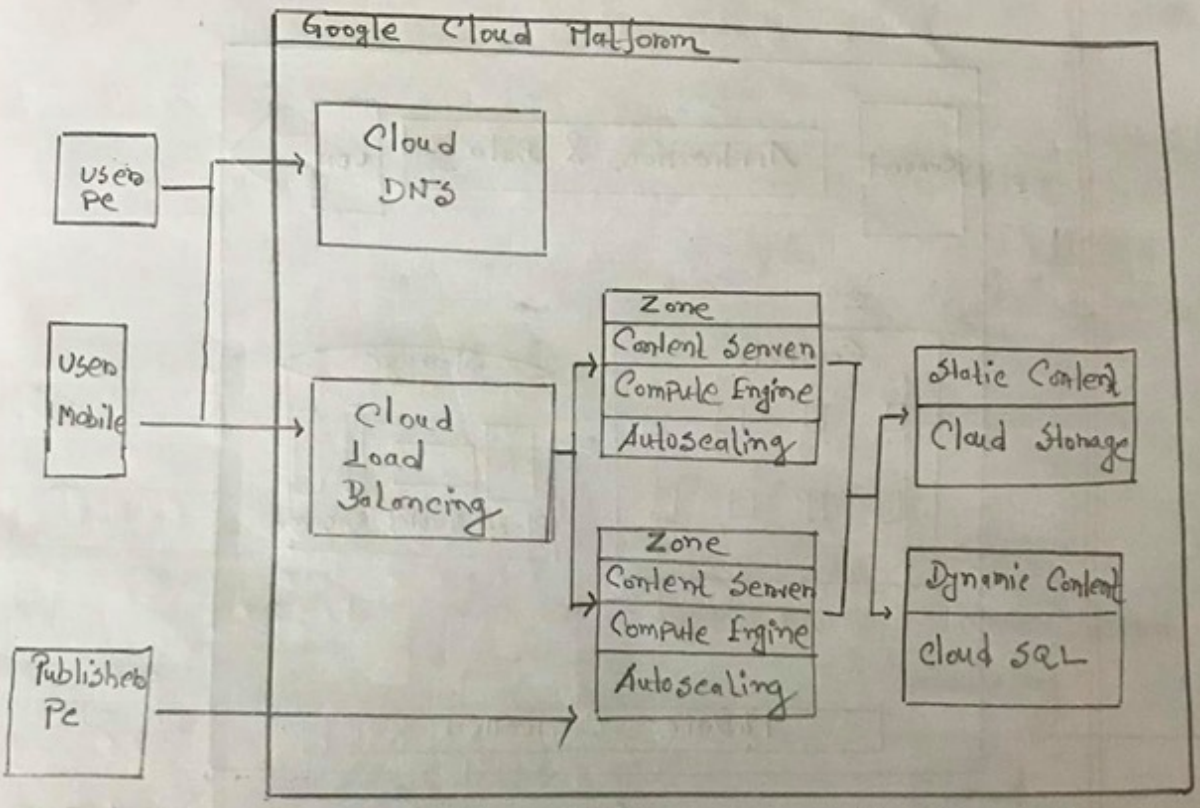


Fig: Google Cloud Platform Model

29. Describe Microsoft Azure cloud Platform with diagram

Ans:

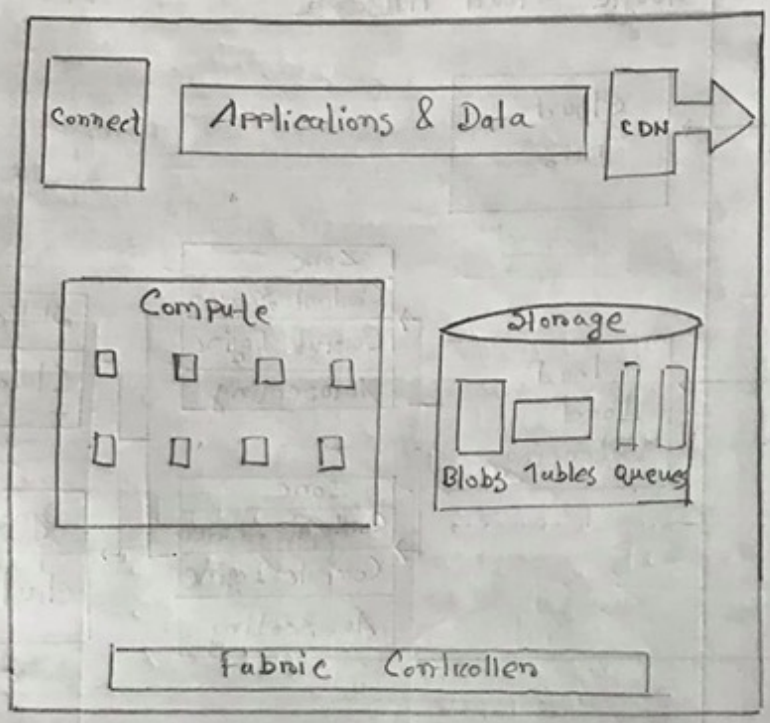


Figure: Micro-Soft Azure cloud Platform

a. Connect:
Connecting the local machine with azure cloud.

b. Application & Data:
The main application is being developed & deployed.

c. CDN:
CDN stands for Content Delivery Network. It maintains cache copies of data to speed up computations.

d. Compute: Consists of little computational blocks.

e. Storage: keeps different types of data.

f. Fabric Controller: It deploys, manages & monitors applications.

30. Draw a Comparison Table for Azure, Google Cloud & AWS.

Ans:

| Topics | AWS | Azure | Google |
|---|---|---|---|
| Load Balancing | Elastic Load Balancing | Load Balancer Application Gateway | Cloud Load Balancing |
| Global Content Delivery Network (GCDN) | CloudFront | CDN | Cloud Interconnect |
| DNS Name & Records | Route 53 | Traffic Manager Azure DNS | Google Cloud DNS |
| Cross Premises Connectivity | API Gateway | VPN Gateway | Cloud VPN |
| Virtual Networking | Virtual Private Cloud | Virtual Network | Subnet |
| Dedicated Private Network connection | Direct Connect | Express Route | None |

30. Write names of Open Source Cloud Platform

Ans:

a. Eucalyptus
b. OpenNebula
c. Nimbus.

31. Write Comparison of Open Source Cloud Architecture.

Ans.

| | Eucalyptus | OpenNebula | Nimbus |
|---|---|---|---|
| Disk Image Options | Set by admin | In Private cloud, most librirt option open | Depends on configuration |
| Disk Image storage | Walrus, same as Amazon S3 | Shared file system NFS or SCP. | Cumulus. |
| Hyper-visors | Xen, KVM | Xen, KVM, VMWare | Xen, KVM |
| Unique Features | Users management web interface | VM migration supported | Nimbus Context broker |

32. Write Comparison of Open Source Cloud based on → utilities. ←

| | Eucalyptus | OpenNebula | Nimbus |
|---|---|---|---|
| Philosophy | Mimic Amazon EC2 | Private, highly customized. | For scientific research. |
| Customizability | Mostly for admin. Some for user. | Everything | Except image storage. |
| DHCP | On Cluster Controller | Variable | On individual Compute node |
| Internal security | Tight, Root required for many things. | Loosen, but can be made more tight if needed. | Fairly tight. |

- Iaas - বিস্তারে বলা যায় ⇒ Amazon Web Services
- Paas - বিস্তারে বলা যায় ⇒ Azure
- Saas - বিস্তারে বলা যায় ⇒ Google Cloud Platform
- Xen - এটা Virtualization টেকনিক।