**Cloud Computing:-**

|  |
| --- |
| Application |
| Data |
| Runtime |
| Middleware |
| OS |
| Virtualization |
| Server |
| Storage |
| Network |

IAAS🡪 SERVER +STORAGE+NETWORK 🡪IN FORM OF VIRTUALIZATION

PAAS🡪 Runtime + Middleware + OS + Virtualization +STORAGE+NETWORK

SAAS🡪APPLICATION+DATA+ Runtime + Middleware + OS + Virtualization +STORAGE+NETWORK

**Deployment model in cloud:**

1-Public Cloud🡪GOOGLE,AZURE,GCP

2-Private Cloud🡪ENTERPRISE {DELL{CALCUTTA,HYD,USA}ONLY ACCESSABLE BY DELL USERS}It is secure

3-Hybrid Cloud🡪

**EC2**

**AWS STORAGE TYPE**

###### **Amazon Simple Storage Service (Amazon S3)**

###### **Amazon Glacier**

###### **Amazon Elastic File System (Amazon EFS)**

###### **Amazon Elastic Block Store (Amazon EBS)**

###### **Amazon EC2 Instance Storage**

###### **AWS Storage Gateway**

###### **AWS Snowball**

###### **Amazon CloudFront**

**9. Amazon FSx for Windows File Server**

**10. Amazon FSx for Lustre**

Furthermore, this article will explore all of the above me

**AWS**

Amazon web services is a collection of remote computing services that together make a cloud computing platform.

**What AWS offer:**

* **Scalability**
* **Availability**
* **Pay as you go**

Amazon Elastic Compute Cloud (Amazon EC2) is a web service that provides secure, resizable compute capacity in the cloud.

SNS –Simple notification service

S3- For storage

Creating EC2 Instance

1-Choosing an AMI amazon machine image this is a software and application packages that we need to run our application //**step1:** **Choose an Amazon Machine Image**

2-Choosing an instance type –choosing hardware based on our requirement**//step2** **Choose an Instance Type** //ram cpu and all size and all.

3-Configure Instance –which subnet, or updating a patch**//step3** **Configure InstanceDetails**

4-Adding additional storage **//step4:Add storage**

5-Adding tags-Identify the instances using the tag**//step5:Add Tags**

6-Configuring security group/firewall**//step6: Configure security group**

7-Review

1-AMI-

🡪Is a template that is used to create a new instance/new vm /new machine based on user requirement.

🡪The AMI would conatin : Software Information ,Operating System information , Volume Information , Access Permission.

AMI’s are of 2 type:

1-Predefined AMI’s

2-Custom AMI’s

Predefined AMI’s are created by Amazon and can be modified by User.

Custom AMI’s are created by user and can be modified by user.

2-Instance/Hardware

Instance Type Families

1-Compute Optimised

2-Memory Optimised

3-GPU Optimised

4-Storage

5-General Purpose

3-Configure Instance

We have to specify the number of instances, kind of network, Stopping the services that is shutdown Behaviour

4-Adding Storage

🡪 Ephemeral Storage

🡪 Amazon Elastic Block Store

🡪 Amazon S3

Free subscription user’s they get to use 30 Gb for 1 year.

Before launching it will ask Key-Pair

Private Key-Is downloaded by the user

Public cloud- Is used by Amazon to check the identity of the user

* [**General Purpose**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#general) **:** The most popular; used for web servers, development environments, etc.
* [**Compute Optimized**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#compute) **:** Good for compute-intensive applications such as some scientific modelling or high-performance web servers.

Ex:- Bank applications

* [**Memory Optimized**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#memory) **:**Used for anything that needs memory-intensive applications, such as real-time big data analytics, or running Hadoop or Spark.
* [**Accelerated Computing**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#accelerated) **:** Include additional hardware (GPUs, FPGAs) to provide massive amounts of parallel processing for tasks such as graphics processing.
* [**Storage Optimized**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#storage) **:**Ideal for tasks that require huge amounts of storage, specifically with sequential read-writes, such as log processing.

**Series Code**

|  |  |
| --- | --- |
| **Type** | **Series** |
| **General Purpose** | **A,T, M** |
| **Compute Optimized** | **C** |
| [**Memory Optimized**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#memory) | **R,X,Z,High Memory** |
| [**Accelerated Computing**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#accelerated) | **F,P,G,In** |
| [**Storage Optimized**](https://cloudacademy.com/blog/aws-ec2-instance-types-explained/#storage) | **H,D,I** |

**EC2 PURCHASING TYPES:**

On-Demand Instances

Reserved Instances

Spot Instances

**AWS CLI**

Download AWS CLI for windows

Configure user on powershell/cmd

Configure in powershell:-- aws configure –profile name

AWS Access Key:-

AWS Secret Access Key

Default key region:

To use services use commands:

AWS IAM

AWS help

AWS IAM list-users