# AMAZON WEB SERVICES

## CHEAT SHEET

## AWS Basics

### AWS

**Amazon Web Services (AWS),** it is a collection of various cloud computing services and application that offers flexible, reliable, easy to use and cost effective solutions

### Cloud Computing

It is an internet-based computing service in which various remote servers are networked to allow centralized data storage and online access to computer services and resources

**Types of cloud:** There are three types of clouds

- **Public cloud:** The resources and services provided by the third-party service providers are available to the customers via internet
- **Private cloud:** Here the resources and services are managed by the organizations or by the third party only for the customers organization
- **Hybrid cloud:** It is a combination of both Public and Private Cloud. The decision to run the services on public or private depends on the parameters like sensitivity of the data and applications, industry certifications and required standards etc.

### Instance

It is a virtual server for running applications on **AWS**
Types of **EC2** instances:

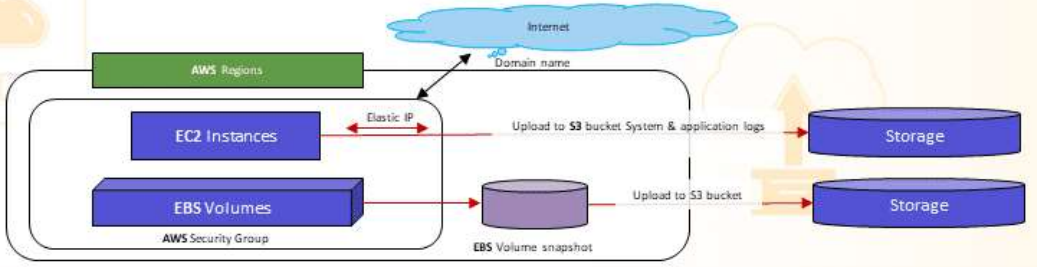
- **General Instances:** It is used for applications that requires a balance of performance and cost
- **Compute Instances:** It is used for applications that requires a lot of processing from the CPU
- **Memory Instances:** It is used for applications that need a lot of RAM
- **Storage Instances:** It is used for applications with a data set that occupies a lot of space
- **GPU Instances:** It is used for applications requiring heavy graphics rendering

### AWS Services

- **EC2:** It is a Virtual Server that provides resizable compute capacity on cloud.
- **Elastic Beanstalk:** It is an application container used for deploying and managing containers.
- **Lambda:** It is a computing service that runs the code in response to events manages the computing resources
- **EC2 Container Service:** It allows us to easily run and manage Docker containers across a cluster of **EC2** instances
- **VPC: Amazon Virtual Private Cloud (VPC)** is a Virtual data center in **AWS** account consisting of a set of isolated resources
- **Direct Connect:** It is used to establish a dedicated network connection from the host network to **AWS** without an internet connection
- **Route 53:** It is a scalable and highly available **Domain Name System (DNS)** and registration service and **53** is the port on which the service runs
- **S3:** It refers to **Simple Storage Service.** Allows storage of data objects
- **CloudFront:** It defines a **Content Delivery Network**
- **Glacier:** It is a low cost storage service which provides secure and durable storage for long term data archiving and backup
- **CloudSearch:** It is a completely managed search service for websites and apps
- **Auto-Scaling:** It is a service which is used to launch or terminate **EC2** instances based on user-defined policies
- **Elastic Load-Balancing:** It automatically distributes incoming application traffic across multiple instances at multiple availability zone.
- **EFS(Elastic File Storage):** It is a file storage service used in **EC2** instances
- **Snowball:** It is used for moving large amount of data into and out of the **AWS** using secure appliances for transport
- **Storage Gateway:** It is used for securely integrating on-premises IT environments with cloud storage for backup recovery
- **EMR:** It is an **Amazon Elastic MapReduce** that helps in performing big data tasks
- **Data Pipeline:** It helps in moving data from one service to other
- **Elastic Search:** It is a managed service that helps in deploying, operating and scale Elasticsearch.
- **Kinesis:** It makes it easy to work with real-time streaming data in the **AWS** cloud
- **Machine Learning:** It is a service that enables us to easily build smart apps
- **Quick Sight:** It is a **Business Intelligence** service.
- **RDS: Relational Database Service (RDS)** allows storage of data objects as a part of relational database.
- **DynamoDB:** It is a scalable **NoSQL** data store that is used to manage distributed replicas of the data for high availability
- **Elasticache:** It improves application performance by allowing you to retrieve information from an in-memory caching system
- **Redshift:** It is a fast, fully managed data-warehousing service
- **DMS: Data Migration Service (DMS)** it helps in migrating databases to the cloud easily and securely.
- **IAM:** It helps in configuring security for all the services.
- **Directory Service:** It is used to provide managed directory in the cloud
- **Inspector:** It enables us to analyze the behavior of the applications you run on **AWS**
- **KMS:** It is a **Key management Service**
- **WAF:** It is an **Web application Firewall** service, which protects web application from attack
- **Cloud HSM:** It is an **Hardware Security Module**
- **API Gateway:** It is used to create, maintain, monitor and secure **API's**
- **AppStream:** It is used to stream resource intensive application and games from the cloud to multiple users
- **Elastic transcoder:** It is used to convert media files in the cloud easily at a low cost
- **SES: Simple Email Service (SES)** is used to send and receive email
- **SQS: Simple Queue Service (SQS)** it is a reliable, hosted queue for storing messages
- **SWF: Simple Workflow Service (SWS)** is used to coordinates all the processing steps with an application
- **Mobile Hub:** It helps in building, testing and monitor the usage of mobile apps
- **Cognito:** It is a simple user identity and data synchronization services that helps in securely managing and synchronizing the app data for users across their mobile devices
- **Device Farm:** It helps in improving the quality of Android, Fire OS and iOS apps by testing against real phones and tablets on cloud
- **Mobile Analytics:** It is a service that is used to easily collect, visualize and understand app usage
- **SNS: Simple Notification Service** helps in publishing messages to subscribers or other applications

### Basic CLI Commands

- **rm <filename>:** It removes the specified file from the current directory
- **cat /proc/mounts:** It displays a list of mounted drives
- **rpm -ql '<package name> ' :** It is used to obtain a list of utilities contained within a package.
- **sudo yum update :** Performs required **AWS** updates
- **sudo chmod <options>:** It changes the access mode for the current directory
- **sudo mkdir <directory name>:** Used to create a new directory to hold files
- **sudo rmdir <directory name>:** Removes the specified directory
- **sudo reboot:** Reboots the remove **AWS** system so that you can see the results of any changes you make
- **sudo yum groupinstall "<group package name>":** Installs the specified group of packages
- **sudo yum search '<package name>':** Package search
- **sudo yum –y install <service or feature>:** Installs required support service or features on **AWS** system

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