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INTRODUCTION TO AWS & EC2 DASHBOARD

AMAZON WEB SERVICES

AWS SERVICES

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➢ INTRODUCTION TO CLOUD:-

➢ What is Cloud Computing?

Cloud computing is a technology that provides **on-demand access** to computing resources such as servers, storage, databases, networking, and software over the Internet. It eliminates the need for physical infrastructure and enables businesses to scale efficiently.

➢ Why This Documentation?

- To consolidate cloud computing knowledge in one place.
- To create a **quick reference guide** for DevOps-related tasks.
- To document **key AWS services, commands, and configurations** for future use.

➢ Topics Covered

Cloud Computing Basics – Concepts, benefits, and service models.
AWS Services Overview – EC2, S3, IAM, VPC, Load Balancers, etc.
Networking & Security – VPC setup, security groups, and best practices.
Deployment Strategies – Terraform, Kubernetes, and CI/CD pipelines.
Troubleshooting & Best Practices – Common issues and solutions.

➢ Personal Note:-

This document will be **updated continuously** based on learning experiences, hands-on projects, and real-world implementations.

➢ INTRODUCTION TO VIRTUALIZATION &CLOUD COMPUTING.

- What is Virtualization?

Virtualization is the process of creating the virtual version of the hardware which allows the running of multiple operating systems in a single machine.

  - Types of Virtualization?
    - Server virtualization:- EC2 ,Instance types.
    - Storage virtualization :-EBS, S3 , snapshot.
    - Network virtualization :- VPC and components.

- What is Hypervisor?

A hypervisor is a software or firmware that creates and manages virtual machines. It allows multiple operating systems to run on a single physical machine by sharing its resources.

- Deployment model:-

This is the model which gives an idea about the type of tenancy the cloud is

  - **Public cloud**
  - **Private Cloud**
  - **Hybrid cloud**
  - **Community cloud**

- Service Model:-

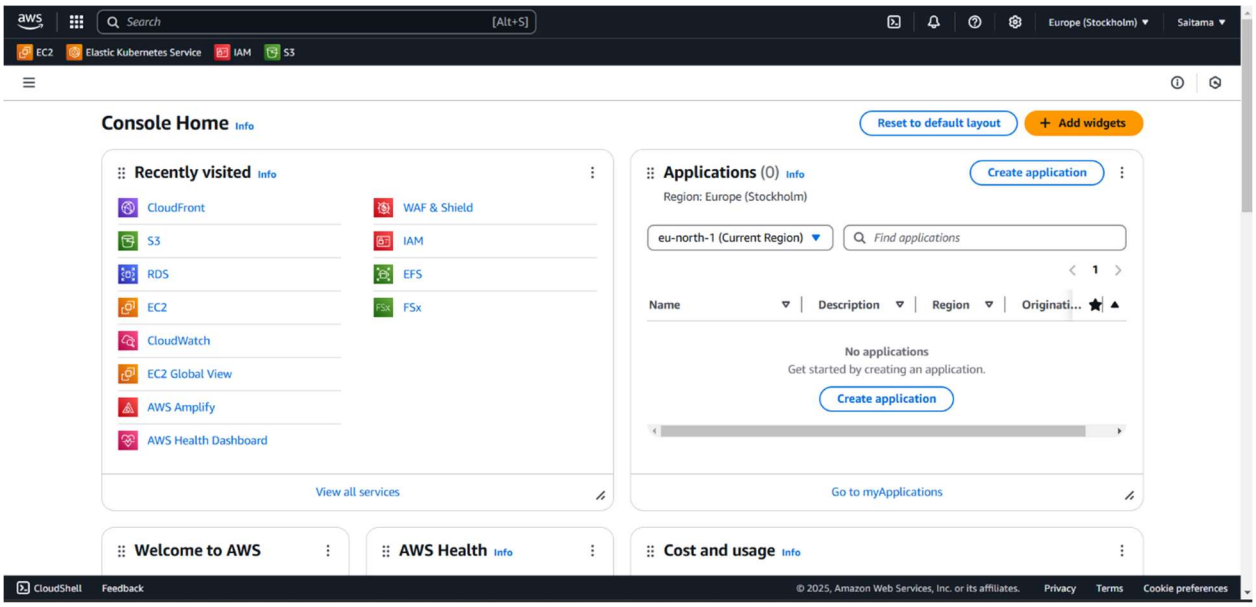
These are the models that give an idea about the services and resources managed by the user and the AWS

  - **Saas:-** Software as a Service
  - **Paas:**- Platform as a Service
  - **IaaS**:- Infrastructure as a Service

➢ Introduction to the AWS dashboard:-

AWS stands for Amazon Web Services which supports the Hybrid, deployment, and on-premise types of Deployment models.
Different AWS services deal with different service models.

Example:- EC2 is a service that measurably deals with the Infrastructure part of the cloud



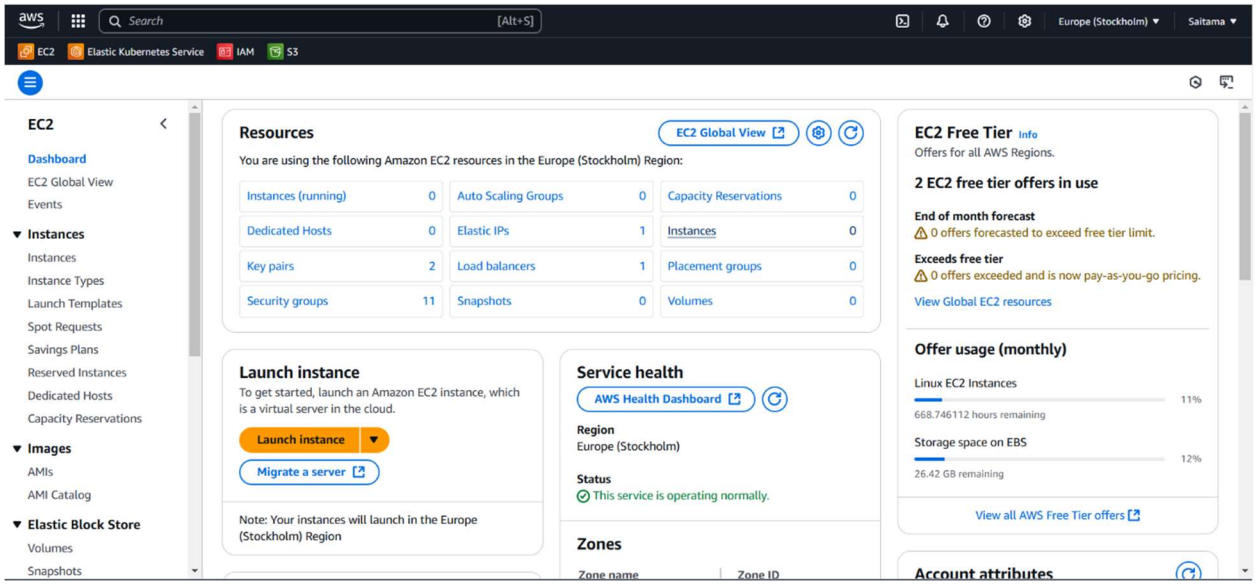
1.1 Dashboard of AWS

The dashboard contains the following components of the fields:-

- **Search bar**:- To search the AWS services easily.
- **Recently visited**:- This shows the services that have been used recently.
- **Region**:- This is located at the top of the right corner and tells about the region you are using
- **Username**:- This is at the topmost right corner and tells us about the user who is using the account
- **Cloudshell**:-this is the place where you can run the CLI commands and make the services accessible by the commands

➢ INTRODUCTION TO EC2 DASHBOARD:-

EC2 service of the AWS play an important role in designing the Infrastructure part of the cloud it has various uses and a variety of infrastructure management tools and it is a ***region specific*** service.



1.2 Dashboard of EC2

The Ec2 instance contains the following components :-

- **Resource overview:-** This is on the left of the screen which contains the list of the resources in the EC2.
- **Service health :-** This give the link to open the Health dashboard of the AWS .
- **Launch Instance:-** With this opetion we can directly create a instance from here itself.
- **Usage info :-** On the right side there is the display of information which displays the information regarding the offer that are going to exceed in the coming time this is only shown when you are using a free tier account.

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