Name: Anand Kanade
Roll Number: 31319
Batch : K3

Case Study on Amazon EC2 Web Services

1. Amazon Web Services (AWS) is a collection of remote computing services, also called web services, that make up a cloud computing platform by Amazon.com. The most central and well-known of these services are Amazon EC2 and Amazon S3. The service is advertised as providing a large computing capacity (potentially many servers) much faster and cheaper than building a physical server farm.

   Benefits:-
   1. Easy to use:- AWS is designed to allow application providers, ISVs, and vendors to quickly and securely host your applications – whether an existing application or a new SaaS-based application. You can use the AWS Management Console or well-documented web services APIs to access AWS's application hosting platform.
   2. Flexible:- AWS enables you to select the operating system, programming language, web application platform, database, and other services you need. With AWS, you receive a virtual environment that lets you load the software and services your application requires. This eases the migration process for existing applications while preserving options for building new solutions.
   3. Cost effective:- You pay only for the compute power, storage, and other resources you use, with no long-term contracts or up-front commitments. For more information on comparing the costs of other hosting alternatives with AWS, see the AWS Economics Center.
   4. Reliable:- With AWS, you take advantage of a scalable, reliable, and secure global computing infrastructure, the virtual backbone of Amazon.com's multi-billion dollar online business that has been honed for over a decade.
   5. Scalable and High Performance:- Using AWS tools, Auto Scaling, and Elastic Load Balancing, your application can scale up or down based on demand. Backed by Amazon's massive infrastructure, you have access to compute and storage resources when you need them.
   6. Secure:- AWS utilizes an end-to-end approach to secure and harden our infrastructure, including physical, operational, and software measures. For more information, see the AWS Security Center.

   Application Solutions:- AWS offers a reliable and flexible cloud infrastructure platform that enables customers to run any type of

business application, from small departmental solutions to mission-critical applications in a secure and robust environment.

2. Amazon Elastic Compute Cloud (EC2):- It is a central part of Amazon.com's cloud computing platform, Amazon Web Services (AWS). EC2 allows users to rent virtual computers on which to run their own computer applications. EC2 allows scalable deployment of applications by providing a Web service through which a user can boot an Amazon Machine Image to create a virtual machine, which Amazon calls an "instance", containing any software desired. A user can create, launch, and terminate server instances as needed, paying by the hour for active servers, hence the term "elastic". EC2 provides users with control over the geographical location of instances that allows for latency optimization and high levels of redundancy.
   Functions:-

   Account Attributes

   AMIs

   AWS Marketplace

   Bundle Tasks

   ClassicLink

   Customer Gateways (Amazon VPC)

   DHCP Options (Amazon VPC)

   Elastic Block Store

   Elastic IP Addresses

   Elastic Network Interfaces (Amazon VPC)

   Instances

   Internet Gateways (Amazon VPC)

   Key Pairs

Network ACLs (Amazon VPC)

Placement Groups

Regions and Availability Zones

Reserved Instances

Route Tables (Amazon VPC)

Security Groups

Spot Instances

Subnets (Amazon VPC)

Tags

VM Import

VM Export

VPCs (Amazon VPC)

VPC Peering Connections (Amazon VPC)

VPN Connections (Amazon VPC)

Virtual Private Gateways (Amazon VPC)

3. HDM:- The company first launched in 1999 as "Hungama.com", a promotional marketing portal. In 2000 the company acquired India fm and in the following years began to work marketing campaigns for companies such as Coca-Cola and Nike.[3] In 2007 Hungama launched their gaming portal and in 2009, the company re-launched their website and company name, changing it to Hungama Digital Media Entertainment. In 2012 Hungama Digital Media Entertainment launched Artist aloud!, a digital platform for artists and music fans.

Challenges:- Before migrating to AWS, the company ran its servers in local data centers. This solution soon became expensive, time-consuming, and inefficient. Hungama wanted to turn projects around quickly but old equipment caused delays in implementation and service launches. In 2008, Hungama migrated to AWS to take advantage of the cost effectiveness, flexibility, and fast time-to-market offered by the cloud. "Our migration to AWS in 2008 reduced IT costs considerably," says Amit Vora, CTO for Hungama. The cost savings allowed Hungama to focus its engineering resources on getting products and services to market more quickly. The company began to grow rapidly, but as more internal teams started using AWS, its monthly costs also grew. Hungama's infrastructure team engaged AWS Support to help them find ways to optimize costs.

Solution by AWS:- As a content provider and aggregator, Hungama requires enormous amounts of storage. The company uses Amazon Simple Storage Service (Amazon S3) to host more than 60 TB of content. For server and storage management, Hungama uses Amazon Elastic Compute Cloud (Amazon EC2) and Amazon Relational Database Service (Amazon RDS) with Amazon S3. The flexibility of the AWS solution enables the Bollywood moviemaker to develop applications on multiple platforms and programming models including Java, PHP, .NET, Oracle, MySQL, and SQL technologies. As an AWS Support, Enterprise-level tier customer, Hungama has access to AWS Trusted Advisor, which customers can use to audit their AWS usage against known best practices. AWS Trusted Advisor identifies opportunities to save money, improve system performance, and security. Hungama used AWS Trusted Advisor to run Cost Optimizing checks, which audited Amazon EC2 instances and Amazon Elastic Block Store (Amazon EBS) volumes in Hungama's environment.