AWS USING MODERN CLOUD COMPUTING

[1]B Sai Santhosh Reddy, [2]C M Sreekar Reddy, [3]B Raj Goutam, [4]Ashish Kumar Behera

[1,2,3,4]student, Dayananda sagar university, Banglore.

[1]eng19cs0067.santhosh@gmail.com, [2]eng19cs0078.sreekar@gmail.com, [3]eng19cs0058.brajgoutam@gmail.com, [4]eng19cs0048.ashish@gmail.com

Abstract: **This article is based on the benefits of AWS in the modern cloud. Cloud computing provides the on-demand services for IT resources over the Internet with pay-as-you-go billing. Organizations of vast variety industries are using the cloud for services such as data backup, disaster recovery, email, virtual desktops, software development and testing, big data analytics, and customer-facing web applications. For example, hospitals are using the cloud to develop more personalized and variety of treatments for patients. Financial sectors also using the cloud to power real-time scam detection and prevention. And many gaming industries are using the cloud platforms to deliver their games through online to millions of players all around the globe. Many companies have already updated their infrastructure and applications to the cloud because of its vast benefits.**

Keywords: **Data, Cloud, AWS, Access Management, Compliance, Effectiveness, Scalability, Piracy, Flexibility, AWS cloud, Amazon Glacier, Amazon S3, Amazon Elastic Block Storage, Amazon EC2 Instance Storage, AWS Import/Export, AWS Storage Gateway, Amazon CloudFront, Amazon SQS, Amazon DynamoDB.**

1. INTRODUCTION

Amazon Web Services (AWS) have been adopted by millions of people around the globe, it offers 200 fully featured services from data centers globally. It is the world's most extensive and broadly adopted modern era cloud platform. Even fast growing startup companies , huge companies , and leading government offices —are using AWS to decrease their costs and innovate quickly. Instead to pay more to data centers and servers before we know how we're going to use them, we can pay only what we consume from computing resources, and pay only for how much we consume. By using of the cloud, we can achieve a lower variable cost than we can get on our own. Because of usage from millions of customers have created heap in the cloud, providers such as AWS can achieve huge increase in their scale. When we make a capacity decision prior to positioning an application, we often end up either spending more on costlier resources or dealing with less bounded resources. With the help of cloud computing platform these problems can be solved easily. We can use resources as much we required, and we can also scale up and down as required with only a few moments. In a cloud computing platform, new IT resources are only a click away, which means that we can reduce the time to make those resources available to our developers from weeks to just minutes. Easily deploy our application in multiple regions all around the globe with just a few clicks. This means they can provide lower delay and a better experience for customers at lesser cost.

User-friendly:

This is the top benefits of the Amazon Web Services. AWS is easy to use as the platform, it is specially designed for faster and secure access. Users can update and modify their data whenever they wish, wherever they want. Most companies prefers using AWS as their cloud provider much easier than using other providers, such as Azure or Google Cloud Platform. AWS provides all the information, documentation, and video instructions to help the users to use all of its services.

Data Protection:

AWS continuously looks at the developing privacy supervising and legislative landscape to detect changes and decide what tools their customers might need to achieve their adherence needs. Maintaining customer trust and belief is an ongoing commitment. Data is the most important strength in any organization. Data loss can cause a huge loss to the organization, so every organization thinks about data privacy at their priority to secure their sensitive data.

Cloud security cat AWS is prime concern. Security in the cloud is same as security in on-premises data centers—only without the costs of maintaining facilities and hardware. We don't have to manage physical servers or storage devices. Instead, we can use security tools of software to protect the exchange of information in and out of our cloud resources.

Access Management:

AWS identities services are used for resources, permission securely, etc. In AWS access control is used for employees, applications so they can use the services. Those who are using phone or web can use AWS Identity services for a quick sign-up and sign-in. It provides how to manage your partner, employees, and customer id so that you can shift the work to AWS. Identities and access management (IAM)security is part of IT that manages digital identities and user access to resources, data.IAM software is used by companies for identities and policies but now they have added more cloud services.

IAM is hard to protect sensitive information from unauthorized persons. The system management of any identity provides privileges, authorization, and enterprise boundaries. The main motive is to upgrade security and productivity by reducing the cost, system downtime.It provides how to manage your partner, employees, and customer id so that you can shift the work to AWS IAM in the cloud covers all types of users who work with devices under unlike circumstances. By organization processing of data and storage is done in the cloud or with a third party. Data and applications stored in the cloud are protected by service provider. IAM can moved simply by allowing or block data access and system for example

Restrict access to data-necessary parts of systems, databases can access by user

Only allow view access-Users can only view data, they cannot add.

Only permit access on certain platforms-access to operational systems but not on development, testing

Regulatory Compliance:

Amazon Web Services (AWS)is a part of the powerful cloud platform. cloud compliance is a concern to new adopters of the technology in a highly dynamic environment. teams can rapidly deploy new resources.

AWS regulatory compliance is built-in companies the power to manage security. Cloud providers create a paradigm shift to security.

 risks are reduced by moving the infrastructure to evolve and maturing the data center. cloud compliance is expedited because of AWS' advanced security services made by highly-experienced engineers across the globe.

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AWS cloud technology innovates rapidly providing feedback and more insight into the environment. A highly sophisticated security architecture is a scale with the business with lower expenses and costs in infrastructure.

Flexibility:

A new benefit of Reserved Instances is announced by AWS is "Instance Size Flexibility" for EC2 Reserved very fast. savings of an RI to apply to any size of compute you run inside of a family.

It will simplify RI planning and it's easy to achieve cloud savings.

Cost Effectiveness:

Using the appropriate resources for work is key to cost savings. this process might take five hours to work on a smaller server but one hour to work on a larger server the smaller server incurs more cost over time than larger server.

well-architected work is the most cost-effective resource that has a positive economic impact. has the opportunity to reduce costs.

AWS has a variety of cost-effective pricing and flexible option from Amazon and other services.

On-Demand Instances you are allowed to pay for computing capacity by the hour, with no minimum commitments. Savings Plans and Reserved Instances offer 75% off saving On-Demand pricing.

Spot Instances are unused Amazon EC2 capacity offers up to 90% off On-Demand pricing.

service selection can also reduce usage and costs to transfer data ,such as to use amazon aurora on RDS to remove high prices database license price .

Secure backend services and platform:

AWS gives more preference to its security. Security responsibilities will be shared between customer and AWS. The following points shows how it is managed:

Security of the cloud-- responsible of protecting the infrastructure that runs services in the cloud will be taken by aws. It also provides customer with services that they can use securely. Third party members will conduct test and check the effectiveness of security of AWS programs .

Security in the cloud – aws will determine customer responsibility that they use. Customers will also be responsible for factors such as sensitivity of their data, their company's requirements, and applicable laws and regulations.

Increase productivity:

Before time is mostly spent to install softwares, ww work to maintain the product and take the back up everyday . most of these problems are solved by cloud where there is no software installation, maximum maintenance is done by Amazon team and backup will be automated. who ever has proper login they can acces comapny's cloud . A lot of time can be solved using a cloud platform which increases productivity. Acceptance of cloud is determined by the selection of the Corporate World, which has added to the amount of data exponentially, plans, and arrangements that an organization needs to manage to keep up. it will request for the best way to keep the business to be planned and ground-breaking, and productions have stated back strong outcomes. A survey was initiated and found that 79% of the users reported higher revenue growth using a cloud platform.

Scalable and Elastic:

Amazon web services are scalable because AWS auto scaling services how ever increases the capacity of constrained resources as per requirements . Spinning up new servers is easy in AWS to add more serveres we can use them with aws .

Elasticity is one of the AWS advantages. If you use less resources and you don't need the rest of them, then to fit to your requirements aws will shrink .It will always lets you know how many number of resources you are using at the instance.

Reliable:

AWS provides well built service to its customers. AWS is used by million active clients among the 200 nation all around the globe. Professional tech team is working on its data security. AWS will perform its work so perfectly when it is most needed and provides so many services that make it more reliable like the ability to automatically recover from errors. Also, services such as amazon dynamoDb and Amazon s3 will store the data in 3 different zones so that even if 2 of them fail to work, the users will still have their data contact . So, AWS is more trustworthy in terms of its services and security which is provided by it.

5 services provided by AWS:

• Amazon Elastic Cloud Compute (EC2)

• Amazon Simple Storage Service (S3)

• Amazon Virtual Private Cloud (VPC)

• Amazon CloudFront

• Amazon Relational Database Services (RDS)

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