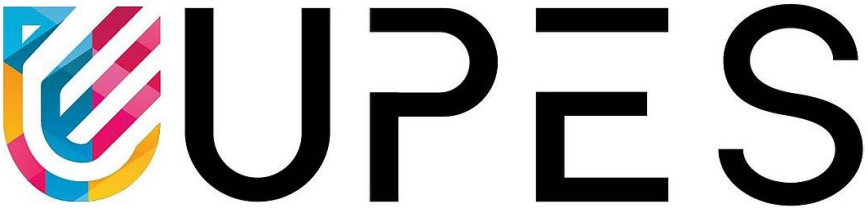

University Of Petroleum and Energy Studies,

Dehradun

Cloud Application Development Lab (theory)

Submitted by:

Name- Vikash kumar

SAP: 500087705

Enrollment No:-R2142201906

batch: B4.CCVT

Submitted To: Saurabh Shanu sir

I am using AWS for hosting and deploying my application. there are several factors for using AWS in place of AZURE such as:-

- (1)Flexibility: AWS offers a high level of flexibility and customization options for configuring your infrastructure, allowing you to choose the specific services and tools that meet your requirements. This level of flexibility makes it easier to create custom solutions that meet your exact needs.
- (2)Ecosystem: AWS has a more extensive ecosystem of third-party integrations and tools compared to Azure, which makes it easier to integrate with other platforms and services.
- (3)Global Infrastructure: AWS has a larger global infrastructure compared to Azure, with more regions and availability zones. This means that businesses with global operations can benefit from AWS's larger presence.
- (4)Cost: AWS's pricing model is generally more transparent and straightforward compared to Azure, which can make it easier to estimate and manage costs.

Now, hosting through AWS is always a popular choice for hosting server-side applications because of several factors:-

- [1]Scalability: AWS offers highly scalable hosting solutions, allowing businesses to quickly and easily adjust their server capacity to meet changing demands. This means you can start with a small instance size and scale up as your application grows, without needing to migrate to a new platform.
- [2]Variety of Services: AWS offers a wide range of services and tools for server-side hosting, including Elastic Compute Cloud (EC2), Elastic Beanstalk, Lambda, and more. This allows businesses to choose the service that best fits their specific use case and requirements.

- [3]Flexibility: AWS provides a high level of flexibility when it comes to configuring your server environment, giving you complete control over your server instance. You can choose your preferred operating system, programming language, and other settings to create a customized environment that meets your exact needs.
- [4]Reliability: AWS offers high availability and reliability, with a service-level agreement (SLA) of 99.99% uptime for most services. This means your server-side applications will be available to users around the clock, with minimal downtime or disruptions.
- [5]Security: AWS provides a wide range of security features and tools to help businesses protect their server-side applications and data. These include encryption, network security, access control, and more.

Overall, AWS is a popular choice for hosting server-side applications due to its scalability, flexibility, reliability, and security features. It provides businesses with the ability to create custom environments that meet their specific requirements and easily scale their infrastructure as their application grows.

Now ,using AWS ECR and AWS EKS are commonly used together for deploying containerized applications in a cloud environment because osf several factors:-

- ECR is a fully-managed container registry that makes it easy to store, manage, and deploy Docker container images. ECR integrates seamlessly with other AWS services, including Kubernetes, making it a natural choice for container-based deployment on AWS.

- Kubernetes is a powerful container orchestration platform that automates the deployment, scaling, and management of containerized applications. EKS (Elastic Kubernetes Service) is a managed Kubernetes service provided by AWS, which allows businesses to run Kubernetes on AWS without needing to manage the underlying infrastructure.

Using ECR and EKS together, businesses can quickly and easily deploy containerized applications to a scalable, reliable, and secure environment. Here are some of the benefits of using these services together for deployment:

- [1]Simplified deployment: ECR and EKS make it easy to deploy containerized applications, with integrated tools for container image management, orchestration, and scaling.
- [2]Seamless integration: ECR and EKS integrate seamlessly with other AWS services, including Identity and Access Management (IAM), Elastic Load Balancing (ELB), and more.
- [3]Scalability: EKS makes it easy to scale your containerized application up or down, based on changing demands. With ECR, you can quickly deploy new container images to meet those demands.
- [3]Security: ECR provides a secure, private registry for container images, while EKS offers built-in security features for containerized applications, including network isolation and encryption.

Overall, using ECR and EKS together can provide a comprehensive, end-to-end deployment solution for containerized applications on AWS, with easy deployment, seamless integration, scalability, and security.