

Week 1: Introduction to AWS Cloud

Start your cloud journey by understanding AWS's core concepts and the global infrastructure that powers its services.

Key Training Components:

- **What is AWS Cloud?:** Introduction to cloud computing and AWS's unique advantages.
- **AWS Global Infrastructure:** Understand regions, availability zones, and edge locations.
- **Shared Responsibility Model:** Learn the division of security responsibilities between AWS and customers.
- **Core Concepts:** Scalability, elasticity, fault tolerance, and pay-as-you-go pricing.

Week 2: AWS Account Setup and Security

Learn how to set up and secure your AWS account, a critical step in your cloud journey.

Key Training Components:

- **AWS Free Tier:** Explore free-tier services and set up an AWS account.
- **IAM Fundamentals:** Manage users, groups, roles, and policies.
- **Security Best Practices:** Enable multi-factor authentication (MFA), set up billing alerts, and monitor activity with CloudTrail.
- **AWS Management Console:** Navigate and utilize the AWS Management Console effectively.

Week 3: Compute with Amazon EC2

Dive into AWS compute services and learn how to provision, manage, and scale virtual servers.

Key Training Components:

- **Amazon EC2 Basics:** Instance types, pricing models (On-Demand, Reserved, Spot).
- **Security Groups:** Configure firewalls to control inbound and outbound traffic.
- **Elastic Load Balancing (ELB):** Distribute traffic across multiple instances.
- **Auto Scaling:** Set up auto-scaling groups for high availability and fault tolerance.

Week 4: Storage and Content Delivery

Understand AWS storage solutions and how to deliver content globally with minimal latency.

Key Training Components:

- **Amazon S3:** Buckets, objects, permissions, and lifecycle management.
- **Amazon EBS:** Attach, manage, and snapshot block storage volumes for EC2 instances.
- **Amazon CloudFront:** Accelerate content delivery using a global content delivery network (CDN).
- **Amazon EFS:** Implement shared storage solutions for applications.

Week 5: Networking with Amazon VPC

Master the art of setting up and securing virtual networks in the AWS cloud.

Key Training Components:

- **Amazon VPC Basics:** Create and configure virtual private clouds (VPCs), subnets, and route tables.
- **Networking Components:** Set up Internet Gateways, NAT Gateways, and VPC Peering.
- **Security in VPC:** Use network access control lists (NACLs) and security groups to secure traffic.
- **Route 53:** Manage DNS routing and traffic policies.

Week 6: Databases in AWS

Learn how to use AWS's managed database services to store, manage, and query data.

Key Training Components:

- **Database:** what is a database
- **Relational and Non-relational database:** Differentiate between a relational and non-relational database
- **Amazon RDS:** Deploy and manage relational databases.
- **Amazon DynamoDB:** Explore NoSQL databases and their applications.
- **Amazon Aurora:** Understand high-performance relational database services.
- **ElastiCache:** Implement caching mechanisms using Redis or Memcached.

Week 7: Monitoring and Logging

Understand how to monitor resources and analyze logs to ensure optimal performance and security.

Key Training Components:

- **Amazon CloudWatch:** Set up alarms, dashboards, and custom metrics.
- **AWS CloudTrail:** Track and audit API calls.
- **VPC Flow Logs:** Monitor and troubleshoot network traffic.
- **AWS Trusted Advisor:** Optimize performance, security, and cost.

Week 8: PaaS,EKS, ECS

Learn how to deploy application AWS PaaS,EKS, ECS.

Key Training Components:

- **Elastic Beanstalk:** Simplify deployment of applications in AWS.
- **EKS, ECS , FARGATE:** Learning about EKS, ECS , FARGATE.

Week 9: Security and Compliance

Explore AWS tools and best practices to secure your cloud environment and ensure compliance.

Key Training Components:

- **AWS KMS:** Encrypt and manage secrets using the Key Management Service.

- **AWS WAF & Shield:** Protect applications from web threats and DDoS attacks.
- **Secrets Manager:** Manage secrets and access keys securely.
- **Compliance Tools:** Use AWS Config to maintain and audit compliance standards.

Week 10: Provisioning, and Automation with AWS CloudFormation

Apply all the skills you've learned by designing and deploying a real-world cloud solution.

Key Training Components:

- Learn what AWS CloudFormation is and its role in automating resource provisioning.
- Write and customize CloudFormation scripts for common AWS services like EC2, S3, RDS, and VPC.

Week 11: Capstone Project

Apply all the skills you've learned by designing and deploying a real-world cloud solution.

Key Training Components:

- **Project Planning:** Define requirements and design a scalable, secure cloud architecture.
- **Implementation:** Build and test your solution using AWS services.
- **Monitoring and Optimization:** Ensure the application meets performance and cost expectations.
- **Presentation:** Showcase your project and explain your architectural decisions.