**AWS Certification Training Curriculum**

**Introduction to AWS**

Classic Data Center

Virtualization

Cloud and Cloud Computing

Cloud Computing Service Models

Cloud Computing Deployment Models

Service Comparison: AWS, Azure, and GCP

Amazon Web Services (AWS) and its Benefits

AWS Global Infrastructure

AWS Regions and Replication of data between the Regions

Availability Zones and High Availability

AWS Edge Location

Different Amazon Web Services

Ways to access AWS: CLI, Console, and SDKs

**Security Management in AWS**

User management through Identity Access Management (IAM)

Various access policies across

AWS Services Security Token Services

AWS Resource Access Manager (RAM),

AWS Single Sign-On (SSO)

AWS Cognito

AWS Security & Encryption: KMS, CloudHSM, Shield, WAF, Guard Duty

API keys service access

Best practices for IAM

Access billing and create alerts on billing

**Object Storage Options**

Traditional Storage

Need to Move to Cloud Storage

Traditional vs. Cloud Storage Cost Cloud Storage

Different Storage Options Available on AWS

Simple Storage Service (S3) and Its Components

Working of S3

Difference Between S3, EBS and EFS

Bucket Policy Access Control List(ACL)

Versioning

Cross-Region Replication (CRR) and Its Use Case

Amazon S3 Transfer Acceleration

Choice of Storage Classes on S3

Lifecycle Policy of S3 Bucket

CDN: CloudFront and AWS Global Accelerator

Storage Gateways

**Amazon EC2**

Virtualization

Amazon Elastic Compute Cloud (EC2) and Its Benefits

Amazon Machine Image (AMI)

Security Groups in AWS

Authentication through Key-pair

Hardware Tenancy – Shared vs. Dedicated

Networking Layer in EC2: VPC

Elastic Network Interface (ENI) and Its Attributes

Different Categories of IP Address

Public IP vs. Elastic IP

Instance Store

Elastic Block Store (EBS), Its Features and Volume Types

Solid State Drive: General Purpose SSD and Provisioned IOPS

Hard Disk Drive: Throughput Optimized HDD and Cold HDD

Snapshots Elastic File System (EFS) and Its Features

EBS vs. EFS

Amazon FSx: Windows File Server and Lustre

**Database Services and Analytics**

Amazon RDS and its benefits

Read Replica RDS

IAM Authentication

DynamoDB

ElastiCache: Working, Redis vs Memcached

Amazon RedShift

Kinesis: AWS Kinesis Data Streams, AWS Kinesis Data Firehouse

AWS Lake Formation

AWS Athena

AWS QLDB

**Load Balancing, Auto-Scaling, and Route 53**

Elastic Load Balancer and its types

Advanced features of ELB

Launch Templates

Launch Configurations

Comparison of Classic, Network and Application Load Balancer

Auto-Scaling

Components of Auto-Scaling

Lifecycle of Auto-Scaling

Auto-Scaling policy

Working of Route 53

Various Routing Policies

**Networking and Monitoring Services**

VPC – Benefits and Components

CIDR Notations

Network Access Control List v/s Security Groups

NAT (Network Address Translation): NAT Devices, NAT Gateway and NAT instance

VPC peering

Direct Connect

Private Link

AWS CloudWatch

AWS CloudTrail

AWS Config

Trusted Advisor

**Applications Services and AWS Lambda**

AWS Simple Email Service (SES)

Implement SES

Demonstrate the working of SNS SQS: Work with SQS, ASG with SQS

Amazon MQ

Amazon Event Bridge

AWS Simple Notification Service (SNS)

AWS Simple Work Flow (SWF)

AWS Lambda AWS Serverless Application Model

**Configuration Management and Automation**

Infrastructure as Code

CloudFormation and its components

Templates in CloudFormation

Stack in CloudFormation

Resource deletion policies in CloudFormation

Introduction to AWS OpsWorks

AWS OpsWorks services

Components of AWS OpsWorks Stack OpsWorks

Lifecycle Events and Deployment Commands OpsWorks for Chef Automate AWS OpsWorks for Puppet Enterprise Auto Healing

Elastic Beanstalk

Components of Elastic Beanstalk Beanstalk v/s OpsWorks v/s CloudFormation

**Migration to AWS**

Why Cloud Migration

What is Cloud Migration

Migration Phases CAF Perspectives and their Roles

AWS Migration Hub and ways to use

AWS Migration Hub Roles and Permissions for AWS Migration Hub

AWS Migration Hub use cases

AWS Application Discovery Service Application Discovery Tools

Application Migration to AWS Application Migration Phases

Virtual Machines migration ways A

WS Server Migration Service(SMS) and its working

Database Migration Implementation steps

Working of DMS AWS Database Migration use cases Types of data transfer: Homogenous and Heterogenous

Database Schema Migration tool

Database Migration best practices