DEVOPS SERIES COURSE CONTENT

Introduction to Linux

- What is Linux?
- Architecture and Basic Commands
- Creation of Files and Directories
- Introduction to Editors: Nano, Vim

User Management

- Creating and Managing Users: useradd, usermod, userdel
- Managing Groups: groupadd, groupmod, groupdel
- Understanding /etc/passwd and /etc/group files
- Switching Users: su, sudo, setting up sudo permissio

Permissions

- Understanding Linux File Permissions: rwx
- Changing Permissions: chmod, chown, chgrp
- Ownership and File Security
- Umask and ACL

Process & Package Management

- Viewing Processes: ps, top, htop
- Managing Processes: kill, killall, nice, renice
- Background & Foreground Processes: bg, fg, jobs
- Package Managers: apt, yum

Scheduling , Archiving and Networking

- Cron Jobs: Scheduling Tasks in Linux
- File Compression and Archiving: tar, gzip, bzip2, zip, unzip
- Extracting Files from Archives
- Basic Networking Commands: ping, ifconfig, netstat
- OSI Model

DEVOPS SERIES COURSE CONTENT

AWS

Introduction to Cloud & EC2

- Types of Cloud Models: IaaS, PaaS, SaaS
- Launching and Configuring EC2 Instances
- Security Groups and Key Pairs
- Connecting to EC2 Instances via SSH
- Elastic IP Addresses, AMIs, Instance Types
- Monitoring EC2 Instances
- EC2 Auto Scaling

IAM and S3

- Understanding IAM Roles, Users, and Policies
- Introduction to S3 Buckets and Objects
- Creating and Managing S3 Buckets
- Bucket Policies and Access Control Lists (ACL)
- Versioning, Lifecycle Policies, and S3 Encryption

VPC (Virtual Private Cloud)

- Introduction to VPC, Subnets, and CIDR Blocks
- Creating VPCs, Subnets, and Route Tables
- Internet Gateway and NAT Gateway/Instance
- Security Groups vs Network ACLs
- VPC Peering

CloudWatch and SNS

- Setting up Alarms and Metrics for EC2,
- Log Management with CloudWatch Logs
- Integrating CloudWatch with Auto Scaling and SNS
- Creating and Subscribing to SNS Topics : Sending Notifications: Email

Route 53 & CloudFront

- Configuring Domain Name System with Route 53
- Creating Hosted Zones and DNS Records
- Generate SSl Certificate
- Creating a CloudFront Distribution

DEVOPS SERIES COURSE CONTENT

DevOps

Introduction to DevOps

- What is DevOps? Key Concepts and Principles
- SDLC
- Methodologies: Waterfall ,Agile, DevOps

Version Control Systems

- Git Fundamentals
- Branching Strategies
- Core Concepts: Repositories, Commits, and History

Jenkins

- What is CI/CD? Definitions and Benefits
- Creating a Pipeline
- Pipeline Stages: Build, Test, Deploy

Monitoring

- Setting up Prometheus: Installation and Configuratio
- Installing and Configuring Grafana

Infrastructure as Code

- Installing and Configuring Terraform
- Key Concepts: Providers, Resources, and Modules
- Initializing and Running Terraform
- Configuring a Remote Backend

Containerization and Orchestration

- Introduction to Docker
- Docker Images: Creating and Managing Images
- Containers: Running, Stopping, and Inspecting Containers
- Dockerfiles: Writing and Optimizing Dockerfiles
- k8s Architecture
- Kubernetes Objects