SAI TECH ACADEMY

AWS CLOUD COMPUTING TRAINING

AWS Cloud Mastery
Fuel Your Career with
In-Demand Skills

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Course Overview

Linux +AWS Cloud ComputingTrainingis a comprehensive,industry-focused program designed for beginners, system administrators, support engineers, and aspiring cloud professionals. The course provides a strong foundation in Linux administration and AWS Cloud services, covering compute, networking, storage, security, monitoring, automation, and serverless technologies.

Through hands-onlabs and practical scenarios, participants will gain real-world experience in deploying, managing, securing, and scaling cloud infrastructure on Amazon Web Services (AWS), preparing them for cloud administration, support, and DevOps-related roles.

Course Objectives

By the end of this course, participants will be able to:

- Understand Linux administration and cloud computing fundamentals.
- Navigate and manage AWS services using the AWS Management Console and AWS CLI.
- Deploy and manage EC2 instances and cloud infrastructure.
- Configure networking using VPC, subnets, routing, gateways, and VPN connectivity.
- Implement IAM and AWS security best practices.
- Manage cloud storage using Amazon S3, EBS, and EFS.
- Configure and manage relational databases using Amazon RDS.
- Deploy scalable and highly available applications using Load Balancers and Auto Scaling.
- Monitor and troubleshoot AWS resources using CloudWatch, SNS, and CloudTrail.
- Automate operations using AWS Systems Manager and AWS Lambda.
- Secure sensitive application credentials using AWS Secrets Manager.
- Host and accelerate websites using Route 53 and CloudFront.
- Build the practical skills required for AWS Cloud Engineer, System Administrator, Support Engineer, and DevOps career paths.

Course Syllabus

Module 1: Linux Fundamentals

- Introduction to Linux
- Linux Architecture and Distributions
- Linux File System
- Essential Linux Commands
- File and Directory Management
- User and Group Administration
- File Permissions and Ownership
- Process Management
- Package Management
- Linux Networking Fundamentals
- Service Management
- Web Server Configuration
- Shell Scripting Basics

Module2:CloudComputing Fundamentals

- What is Cloud Computing?
- Cloud Service Models (IaaS, PaaS, SaaS)
- Public, Private, and Hybrid Cloud
- Benefits of Cloud Computing
- Introduction to AWS
- AWS Global Infrastructure
- Regions and Availability Zones
- AWS Free Tier Account Setup

Module 3: Identity and Access Management (IAM)

- AWS Account Structure
- Root User vs IAM User
- Users, Groups, and Roles
- IAM Policies and Permissions
- Multi-Factor Authentication (MFA)
- IAM Security Best Practices
- AWS CLI Configuration

Module 4: Amazon EC2 (Elastic Compute Cloud)

- EC2 Fundamentals
- Instance Types and Pricing Models
- Amazon Machine Images (AMI)
- Key Pairs and Secure Access
- Security Groups
- User Data and Metadata
- Elastic IP Addresses
- Placement Groups
- Network Interfaces
- Launch Templates
- EBS Volumes and Snapshots
- Custom AMI Creation

Module 5: Amazon VPC & Networking

- VPC Fundamentals
- CIDR and IP Addressing
- Public and Private Subnets
- Internet Gateway (IGW)
- NAT Gateway and NAT Instance
- Route Tables
- Network ACLs
- Security Groups
- Bastion Host
- VPC Flow Logs
- VPC Peering
- Transit Gateway
- VPC Endpoints
- Site-to-Site VPN
- Customer Gateway and Virtual Private Gateway

Module 6: AWS Storage Services

- Amazon S3
- Buckets and Objects
- Storage Classes
- Versioning
- Lifecycle Management
- Cross-Region and Same-Region Replication
- Encryption and KMS
- Pre-Signed URLs
- Static Website Hosting
- Event Notifications
- Access Points
- Amazon EBS
- Volume Types
- Snapshots
- Performance Optimization
- Volume Management

Module 7: Amazon EFS (Elastic File System)

- EFS Architecture and Benefits
- EFS vs EBS vs S3
- Creating and Configuring EFS
- Mount Targets and Security Groups
- Mounting EFS on EC2 Instances
- Shared File Storage Across Multiple Instances
- Performance and Throughput Modes
- Backup and Data Protection

Module 8: Load Balancing & Auto Scaling

Elastic Load Balancer (ELB)

- Application Load Balancer (ALB)
- Network Load Balancer (NLB)
- Target Groups
- Listener Rules
- Health Checks

Auto Scaling

- Auto Scaling Groups (ASG)
- Scaling Policies
- Scheduled Scaling
- Dynamic Scaling
- Instance Warm-Up and Cool-Down

Module 9: Amazon Route 53

- DNS Fundamentals
- Hosted Zones
- Record Types
- Routing Policies
- Health Checks
- Failover Routing
- Latency-Based Routing
- Multi-Region Architectures

Module 10: Amazon RDS (Relational Database Service)

- Database Fundamentals
- RDS Architecture
- Database Engine Selection
- Storage and Backup Management
- Read Replicas
- Multi-AZ Deployments
- Monitoring and Maintenance

Module 11: AWS Systems Manager (SSM)

- Introduction to AWS Systems Manager
- Session Manager
- Run Command
- Patch Manager
- Parameter Store
- Automation Documents
- Inventory Management
- State Manager
- Operational Best Practices

Module 12: AWS Secrets Manager

- Introduction to Secrets Management
- Storing and Managing Secrets
- Automatic Secret Rotation
- Integration with RDS and Lambda
- Access Control Using IAM
- Encryption with AWS KMS
- Security Best Practices

Module 13: AWS CloudTrail

- Introduction to CloudTrail
- Governance and Compliance
- Event History
- Management Events
- Data Events
- Insights Events
- Trail Creation and Configuration
- Multi-Region Trails
- Integration with S3 and CloudWatch
- Security Auditing and Monitoring

Module 14: AWS Elastic Beanstalk

- Application Deployment Fundamentals
- Environment Management
- Application Scaling
- Monitoring and Logging
- Deployment Strategies
- Application Lifecycle Management

Module 15: Amazon CloudWatch & SNS

Amazon CloudWatch

- Metrics and Dashboards
- Log Monitoring
- Custom Metrics
- CloudWatch Alarms
- Event Monitoring

Amazon SNS

- Topics and Subscriptions
- Email Notifications
- Infrastructure Alerts
- Event-Based Notifications

Module 16: AWS Lambda (Serverless Computing)

- Introduction to Serverless Architecture
- Lambda Functions
- Event-Driven Computing
- Lambda Layers
- Environment Variables
- Boto3 Automation
- AWS Service Integrations
- Lambda Best Practices

Practical Learning

- Hands-on labs andreal-world scenarios included throughout the course.
- End-to-End Real-Time AWS Cloud Project Implementation covering infrastructure deployment, networking, security, storage, monitoring, automation, and application hosting.

THANK YOU

Thank you for your interest in our Linux + AWS Cloud Computing Training Program.

We are dedicated to empowering aspiring professionals with the knowledge, skills, and practical experience required to excel in today's cloud-driven world.

For course inquiries, admissions, and support, please contact us:

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We look forward to helping you achieve your career goals.
SaiTech Academy
Building Future Cloud & DevOps Professionals