



CAREER INNOVATIONS

Empowering Future DevOps Leaders

Cloud Program

Empower Your Potential: Reach for the Clouds!

In essence, cloud computing refers to the delivery of computing services—such as storage, databases, servers, networking, software, and analytics—over the internet ("the cloud"). This model offers significant advantages over traditional on-premises infrastructure, including scalability, flexibility, cost-efficiency, and accessibility. Users can access these resources on-demand from anywhere, without the need for extensive local hardware or infrastructure investments. Cloud computing providers, such as AWS, Azure, and GCP, maintain and manage the underlying hardware and software, allowing users to focus on their core business operations rather than IT infrastructure management. As organizations increasingly embrace digital transformation, cloud computing has become a cornerstone, enabling innovation, agility, and rapid deployment of applications and services to meet the demands of modern business environments.

Course Overview

Modules mentioned below are part of all cloud providers so that AWS, Microsoft Azure and GCP.

Module 1: Introduction to Cloud Computing

- Understanding Cloud Computing
- What is cloud computing?
- Evolution and benefits of cloud computing
- Types of cloud services (IaaS, PaaS, SaaS)
- Cloud Service Providers
- Overview of major cloud providers (AWS, Azure, Google Cloud)
- Comparison of services and pricing models
- Choosing the right provider for your needs

Module 2: Getting Started with Cloud Platforms

- Setting Up a Cloud Environment
- Creating an account and accessing services
- Overview of cloud consoles and management interfaces
- Hands-on: Setting up a virtual machine (VM) instance
- Cloud Storage Solutions
- Types of cloud storage (object storage, block storage)
- Using cloud storage for data backup and sharing
- Hands-on: Uploading and managing files in cloud storage

Module 3: Deploying Applications in the Cloud

- Virtualization and Containers
- Virtual machines vs containers
- Introduction to Docker and container orchestration
- Hands-on: Deploying a Docker container in the cloud
- Deploying Web Applications
- Basics of web application architecture
- Deploying a sample web application on a cloud platform
- Configuring auto-scaling and load balancing

Module 4: Managing Cloud Resources

- Monitoring and Logging
- Importance of monitoring in cloud environments
- Using cloud provider tools for monitoring
- Hands-on: Setting up monitoring alerts
- Security and Compliance
- Overview of cloud security principles

- Securing data and applications in the cloud
- Compliance considerations (GDPR, HIPAA, etc.)

Module 5: Advanced Topics and Future Trends

- Serverless Computing
- Introduction to serverless architecture
- Benefits and use cases of serverless computing
- Hands-on: Building a serverless application
- Emerging Trends in Cloud Computing
- AI and machine learning in the cloud
- Edge computing and IoT
- Future directions of cloud computing
- Wrap-Up and Q&A

Module 6: Recap

- Recap of key concepts and skills learned.
- Question and answer session
- Certification exam (optional)

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