Cloud Computing Certification Course

Course Duration: 90 Days

Topics & Details

Introduction to Cloud Computing:

- ★ Overview of cloud computing
- ★ Cloud service models (Iaas, Pass, SaaS)
- ★ Cloud development models (public, private, hybrid)

Cloud Computing Benefits and Challenges

- ★ Benefits of cloud computing
- ★ Challenges and risks
- ★ Cost analysis and management

Cloud Computing Standard and Complience:

- ★ Key cloud standard (e.g. ISO, NIST)
- ★ Compliance and legal issues
- ★ Data privacy and security regulations

Overview of major Cloud Providers:

- ★ Amazon web services (AWS)
- ★ Microsoft Azure
- ★ Google cloud platform (GCP)

AWS Fundamentals:

- ★ AWS core services (EC2, S3, RDS, IAM)
- ★ AWS management console
- ★ Setting up an AWS account

Azure Fundamentals:

- ★ Azure cloud services (VMs, Blob storage, SQL database)

- ★ Azure portal and resources management
- ★ Setting up an azure account

Google Cloud Fundamentals:

- ★ GCP core services (compute engine, cloud storage, BigQuery)
- ★ Google cloud console
- ★ Setting up a GCP account

Cloud Architecture Principles:

- ★ Designing for scalability and reliability
- ★ High availability and fault tolerance
- ★ Load balancing and auto scanning

Cloud Storage Solution:

- ★ Object storage vs. block storage
- ★ Cloud storage services (AWS, S3, Azure blob storage, GCP cloud storage)
- ★ Data backup and recovery

Cloud Networking:

- ★ Virtual networks and subnets
- ★ VPNs and private connections
- ★ Content delivery networks (CDNs)

Cloud Security and Identity Management:

- ★ Security best practices
- ★ Identity and access management (IAM)
- ★ Encryption and key management

Cloud Deployment Models:

- ★ Deployment strategies (blue-green, canary)
- ★ Continuous integration and continuous deployment (CI/CD)
- ★ Infrastructure as code (AaS)

Cloud DevOps Practices:

- ★ DevOps tools and services (AWS CodePipeline, Azure DevOps, GCP cloud build)
- ★ Monitoring and logging
- ★ Automation and configuration management

Serverless Computing:

- ★ Introduction to serverless architecture
- ★ Serverless services (AWS Lambda, Azure functions, Google cloud functions)
- ★ Use cases and best practices

Containers and Orchestration:

- ★ Introduction to containers (Docker)
- ★ Container Orchestration (Kubernetes)
- ★ Managed container services (ECS, AKS, GKE)

Building Scalable Application:

- ★ Designing for performance and scalability
- ★ Case studies of scalable architecture
- ★ Best practices for application scaling

Data Analytics and Big Data:

- ★ Cloud Based data analytics services (AWS Redshift, Azure synapse, GCP BigQuery)
- ★ Big data solutions and frameworks (Hadoop, sparks)
- ★ Real-Time data processing

Artificial Intelligence and Machine Learning in the Cloud:

- ★ Cloud based AI services (AWS SageMaker, Azure ML, GCP AI platform)
- ★ Use cases and application
- ★ Building and deploying models

Disaster Recovery ad Business Continuity:

- ★ Disaster recovery planning

- ★ Backup and restore strategies
- ★ Business continuity planning

Cost Management and Optimization:

- ★ Cloud cost management tools (AWS cost explorer, Azure cost management, GCP billing)
- ★ Cost optimization strategies
- ★ Budgeting and forecasting

Cloud Migration Strategies

- ★ Cloud migration planning
- ★ Migration tools and services
- ★ Case studies of successful migrations

Advanced Cloud Security:

- ★ Threat detection and response
- ★ Security automation and compliance tools
- ★ Advanced encryption techniques

Multi-Cloud and Hybrid Cloud Environments:

- ★ Managing multi cloud deployments
- ★ Hybrid cloud integration
- ★ Best practices and tools

Industry-Specific Cloud Solutions:

- ★ Cloud solutions for healthcare, Finance and retail
- ★ Compliance and regulatory considerations
- ★ Case studies and best practice

Certification Exam Preparation:

- ★ Review of key concepts and topics
- ★ Practice questions and exam strategies
- ★ Tips for passing the certification exam