



## Course Content - Master in Cloud Computing

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## **Description:**

This "MASTER IN CLOUD COMPUTING" Program is the only course in the WORLD that can make you an expert and proficient in Cloud Computing Platform. Our curriculum has been determined by comprehensive research on 10000+ job descriptions across the globe and epitome of 200+ years of industry experience.

## **Prerequisites**

- Operating systems like Windows, Linux, etc.
- Networking required for operations purposes.
- Basics of Public and Private Cloud.
- Basic command over coding as some auxiliary software might require it.
- Understanding of virtualization.

## **Agenda:**

### **Azure Fundamental (AZ - 900)**

- Benefits and considerations of using cloud services
- Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS) and Software-as-a-Service (SaaS)
- Public, Private and Hybrid cloud models

### **Core Azure Services:**

- Core Azure architectural components
- Core products available in Azure
- Solutions available on Azure
- Azure management tools

### **Security, Privacy, Compliance, and Trust:**

- Securing network connectivity in Azure
- Core Azure Identity services
- Security tools and features of Azure
- Azure governance methodologies
- Monitoring and reporting options in Azure
- Privacy, compliance and data protection standards in Azure

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## **Azure Pricing, Service Level Agreements, and Lifecycles:**

- Azure subscriptions
- Planning and management of costs
- Azure Service Level Agreements (SLAs)
- Service lifecycle in Azure

## **Azure Administrator (AZ - 104)**

### **Manage Azure identities:**

- Manage Azure AD objects
- Manage role-based access control (RBAC)
- Manage subscriptions and governance

### **Implement and manage storage:**

- Manage storage accounts
- Manage data in Azure Storage
- Configure Azure files and Azure blob storage

### **Deploy and manage Azure compute resources:**

- Configure VMs for high availability and scalability
- Automate deployment and configuration of VMs
- Create and configure VMs
- Create and configure containers
- Create and configure Web Apps

### **Configure and manage virtual networking:**

- Implement and manage virtual networking
- Configure name resolution
- Secure access to virtual networks
- Configure load balancing
- Monitor and troubleshoot virtual networking
- Integrate an on-premises network with an Azure virtual network

### **Monitor and back-up Azure resources:**

- Monitor resources by using Azure Monitor
- Implement backup and recovery

### **Azure Solution Architect (AZ - 303)**

#### **Implement and Monitor an Azure Infrastructure:**

- Implement cloud infrastructure monitoring
- Implement storage accounts
- Implement VMs for Windows and Linux
- Automate deployment and configuration of resources
- Implement virtual networking
- Implement Azure Active Directory
- Implement and manage hybrid identities

#### **Implement Management and Security Solutions:**

- Manage workloads in Azure
- Implement load balancing and network security
- Implement and manage Azure governance solutions
- Manage security for applications

#### **Implement Solutions for Apps:**

- Implement an application infrastructure
- Implement container-based applications

#### **Implement and Manage Data Platforms:**

- Implement NoSQL databases
- Implement Azure SQL databases

#### **Design Monitoring:**

- Design for cost optimization
- Design a solution for logging and monitoring



### **Design Identity and Security:**

- Design authentication
- Design authorization
- Design governance
- Design security for applications

### **Design Data Storage:**

- Design a solution for databases
- Design data integration
- Select an appropriate storage account

### **Design Business Continuity:**

- Design a solution for backup and recovery
- Design for high availability

### **Design Infrastructure:**

- Design a compute solution
- Design a network solution
- Design an application architecture
- Design migrations

## **AWS Certified Solutions Architect – Associate**

### **Design Resilient Architectures:**

- Design a multi-tier architecture solution
- Design highly available and/or fault-tolerant architectures
- Design decoupling mechanisms using AWS services
- Choose appropriate resilient storage

### **Design High-Performing Architectures:**

- Identify elastic and scalable compute solutions for a workload
- Select high-performing and scalable storage solutions for a workload
- Select high-performing networking solutions for a workload
- Choose high-performing database solutions for a workload



### **Design Secure Applications and Architectures:**

- Design secure access to AWS resources
- Design secure application tiers
- Select appropriate data security options

### **Design Cost-Optimized Architectures:**

- Identify cost-effective storage solutions
- Identify cost-effective compute and database services
- Design cost-optimized network architectures

### **AWS Certified Solution Architect – Professional**

#### **Design for Organizational Complexity:**

- Determine cross-account authentication and access strategy for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements)
- Determine how to design networks for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements)
- Determine how to design a multi-account AWS environment for complex organizations (for example, an organization with varying compliance requirements, multiple business units, and varying scalability requirements)

#### **Design for New Solutions:**

- Determine security requirements and controls when designing and implementing a solution
- Determine a solution design and implementation strategy to meet reliability requirements
- Determine a solution design to ensure business continuity
- Determine a solution design to meet performance objectives
- Determine a deployment strategy to meet business requirements when designing and implementing a solution



### **Migration Planning:**

- Select existing workloads and processes for potential migration to the cloud
- Select migration tools and/or services for new and migrated solutions based on detailed AWS knowledge
- Determine a new cloud architecture for an existing solution
- Determine a strategy for migrating existing on-premises workloads to the cloud

### **Cost Control:**

- Select a cost-effective pricing model for a solution
- Determine which controls to design and implement that will ensure cost optimization
- Identify opportunities to reduce cost in an existing solution

### **Continuous Improvement for Existing Solutions:**

- Troubleshoot solution architectures
- Determine a strategy to improve an existing solution for operational excellence
- Determine a strategy to improve the reliability of an existing solution
- Determine a strategy to improve the performance of an existing solution
- Determine a strategy to improve the security of an existing solution
- Determine how to improve the deployment of an existing solution

## **Google Cloud Engineer – Associate**

### **Setting up a cloud solution environment:**

- Setting up cloud projects and accounts. Activities include
- Managing billing configuration. Activities include
- Installing and configuring the command line interface (CLI), specifically the Cloud SDK (e.g., setting the default project).

### **Planning and configuring a cloud solution**

- Planning and estimating GCP product use using the Pricing Calculator
- Planning and configuring compute resources. Considerations include
- Planning and configuring data storage options. Considerations include
- Planning and configuring network resources. Tasks include



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### **Deploying and implementing a cloud solution:**

- Deploying and implementing Compute Engine resources. Tasks include:
- Deploying and implementing Google Kubernetes Engine resources. Tasks include
- Deploying and implementing App Engine, Cloud Run, and Cloud Functions resources. Tasks include, where applicable
- Deploying and implementing data solutions. Tasks include
- Deploying and implementing networking resources. Tasks include
- Deploying a solution using Cloud Marketplace. Tasks include
- Deploying application infrastructure using Cloud Deployment Manager. Tasks include

### **Ensuring successful operation of a cloud solution:**

- Managing Compute Engine resources. Tasks include:
- Managing Google Kubernetes Engine resources. Tasks include
- Managing App Engine and Cloud Run resources. Tasks include
- Managing storage and database solutions. Tasks include
- Managing networking resources. Tasks include
- Monitoring and logging. Tasks include

### **Configuring access and security:**

- Managing identity and access management (IAM). Tasks include
- Managing service accounts. Tasks include
- Viewing audit logs for project and managed services.

