CLOUD COMPUTING, MIGRATION AND HYBRID CLOUD MANAGEMENT COURSE

Introduction

This programme equips IT professionals with the knowledge and practical skills required to plan, implement and manage cloud computing environments. It examines cloud service models, deployment architectures, workload migration, hybrid cloud integration, security, governance and cost optimization. Participants explore how organizations can transition from traditional on-premises infrastructure to cloud-based environments while maintaining business continuity, data integrity and operational efficiency. The programme covers cloud readiness assessments, application dependency mapping, migration planning, cloud networking, identity and access management, monitoring and disaster recovery. The course also examines hybrid and multi-cloud management, enabling participants to integrate existing infrastructure with cloud services while controlling operational risks and expenditure. Practical exercises focus on cloud architecture design, migration roadmaps, security controls and resource optimization. Examples can be adapted to Microsoft Azure, Amazon Web Services and Google Cloud environments.

Course Objectives

- Explain cloud computing concepts, service models and deployment architectures.
- Evaluate organizational readiness for cloud adoption and migration.
- Develop cloud migration strategies and implementation roadmaps.
- Design and manage hybrid and multi-cloud environments.
- Apply cloud security, identity management and governance controls.
- Monitor cloud performance, availability and resource utilization.
- Develop cloud cost optimization, backup and disaster recovery strategies.

Course Modules

P.O Box 7254- 01000
www.trustgatecorporateskills.co.ke
Location Thika & Nairobi

> Module 1: Cloud Computing Fundamentals and Service Models
- Evolution, concepts and business applications of cloud computing.
- Infrastructure as a Service, Platform as a Service and Software as a Service.
- Public, private, community and hybrid cloud deployment models.
- Cloud shared-responsibility models and stakeholder roles.

> Module 2: Cloud Architecture and Infrastructure Design
- Cloud architecture principles and reference architectures.
- Compute, storage and networking services.
- Scalability, elasticity, availability and fault tolerance.
- Workload placement and cloud architecture design considerations.

> Module 3: Cloud Readiness Assessment and Migration Planning
- Assessing infrastructure, applications and organizational readiness.
- Workload discovery, application classification and dependency mapping.
- Migration strategies: rehosting, replat forming, refactoring, repurchasing, relocating and retiring.
- Migration roadmaps, budgeting, risk assessment and stakeholder engagement.

> Module 4: Cloud Migration Execution and Validation
- Data migration methods, transfer planning and integrity verification.
- Application migration sequencing and dependency management.
- Testing, cutover planning, rollback and service validation.
- Post-migration assessment and operational handover.

> Module 5: Hybrid Cloud and Multi-Cloud Management
- Hybrid cloud architecture and on-premises integration.
- Secure connectivity and identity federation.
- Multi-cloud operations, portability and vendor dependency management.
- Centralized monitoring, policy enforcement and resource governance.

> Module 6: Cloud Networking and Storage Management
- Virtual networks, subnets, routing and network segmentation.
- VPNs, private connectivity and traffic management.
- Object, block and file storage services.
- Storage lifecycle management, replication and data protection.

> Module 7: Cloud Security and Identity Management

- Cloud security architecture and shared responsibility.
- Identity and access management, role-based access and least privilege.
- Data encryption, key management and secrets protection.
- Security monitoring, vulnerability management and incident response.

> Module 8: Cloud Governance, Compliance and Risk Management

- Cloud policies, standards and governance structures.
- Regulatory compliance, data residency and privacy considerations.
- Cloud risk registers, control assessment and audit readiness.
- Configuration standards, policy enforcement and compliance reporting.

> Module 9: Cloud Operations, Reliability and Cost Optimization

- Cloud monitoring, logging, alerting and performance management.
- Resource sizing, capacity planning and workload optimization.
- Cloud budgeting, cost allocation and financial accountability.
- Backup, disaster recovery, resilience testing and service continuity.

> Module 10: Cloud Transformation Strategy and Practical Project

- Developing an organizational cloud adoption strategy.
- Evaluating cloud providers, service agreements and procurement options.
- Designing a migration plan for a selected organizational workload.
- Presenting a cloud implementation roadmap with costs, risks and performance indicators.

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