Fundamental Cloud Computing

OEM: Arcitura • Duration: 3 Days (24 hrs) • Code: C90.01

COURSE MODULES & TOPICS

Module 1: Fundamental Cloud Computing

- Fundamental Cloud Computing Terminology and Concepts
- Basics of Virtualization
- Specific Characteristics that Define a Cloud
- Understanding Elasticity, Resiliency, On-Demand and Measured Usage
- Benefits, Challenges and Risks of Contemporary Cloud Computing Platforms and Cloud Services
- Cloud Resource Administrator and Cloud Service Owner Roles
- Cloud Service and Cloud Service Consumer Roles
- Understanding the Software as a Service (SaaS) Cloud Delivery Model
- Understanding the Platform as a Service (PaaS) Cloud Delivery Model
- Understanding the Infrastructure as a Service (IaaS) Cloud Delivery Model
- Combining Cloud Delivery Models
- Public Cloud, Private Cloud, Hybrid Cloud and Community Cloud Deployment Models
- Business Cost Metrics and Formulas for Comparing and Calculating Cloud and On-Premise Solution Costs
- Formulas for Calculating and Rating SLA Quality of Service Characteristics

Module 2: Cloud Technology Concepts

- Cloud Computing Mechanisms that Establish Architectural Building Blocks
- Virtual Servers, Containers, Ready-Made Environments, Failover Systems and Pay-Per-Use Monitors
- Automated Scaling Listeners, Multi-Device Brokers and Resource Replication
- Understanding How Individual Cloud Computing Mechanisms Support Cloud Characteristics
- An Introduction to Containerization, Container Hosting and Logical Pod Containers
- A Comparison of Containerization and Virtualization
- Cloud Balancing and Cloud Bursting Architectures
- Common Risks, Threats and Vulnerabilities of Cloud-based Services and Cloud-hosted Solutions
- Cloud Security Mechanisms used to Counter Threats and Attacks
- Understanding Cloud-Based Security Groups and Hardened Virtual Server Images
- Cloud Service Implementation Mediums (including Web Services and REST Services)
- Cloud Storage Benefits and Challenges, Cloud Storage Services, Technologies and Approaches
- Non-Relational (NoSQL) Storage Compared to Relational Storage
- Cloud Service Testing Considerations and Testing Types

- Service Grids and Autonomic Computing
- Cloud Computing Industry Standards Organizations

Module 3: Cloud Technology Lab

- Reading Exercise 3.1: AGC Case Study Background
- Lab Exercise 3.2: Plan the Cloud Environments
- Lab Exercise 3.3: Perform Cost Comparison Analysis
- Lab Exercise 3.4: Secure the PaaS Environment
- Reading Exercise 3.5: AFR Case Study Background
- Lab Exercise 3.6: Design a SaaS Implementation
- Lab Exercise 3.7: Calculate SLA Availability
- Lab Exercise 3.8: Calculate Combined SLA Availability
- Reading Exercise 3.9: AAS Bargain Service Case Study Background
- Lab Exercise 3.10: Identify Benefits/Challenges for Proposed IaaS Environment
- Lab Exercise 3.11: Design the Bargain Service Implementation
- Lab Exercise 3.12: Secure the IaaS Environment
- is authored by a dedicated courseware development team
- has a self-test, accreditation exam and professional certification
- is available via two different eLearning platforms
- undergo a common development process
- are authored to be consistent in quality, structure and style
- share a common vocabulary and symbol notation
- are authored in collaboration with subject matter experts
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