

Cloud Computing

By the end of this course, students will be able to:

Remembering:

- Define Cloud Computing and explain its characteristics, advantages, and disadvantages
- Identify and distinguish between different Cloud Deployment Models: Public Cloud Model, Private Cloud Model, Hybrid Cloud Model, Community Cloud Model
- Recall various Cloud Technologies such as Virtualization, Service-Oriented Architecture (SOA), Grid Computing, and Utility Computing
- Recognize the components of Cloud Computing Architecture: Front-End and Back-End, Management Software, Deployment Software, Network, Server, and Storage
- List the Cloud Service Models: Infrastructure-as-a-Service, Platform-as-a-Service, Software-as-a-Service, Identity-as-a-Service, and Network-as-a-Service

Understanding:

- Explain the Cloud solutions provided by Microsoft, Google, Amazon Web Service (AWS), Cisco, and IBM including their features, deployment options, advantages, and limitations
- Describe the need for virtualization and differentiate between different Types of hardware virtualization
- Understand the concept of Virtualization including Desktop virtualization, Server Virtualization, Hypervisor, Virtual machines, and Virtualization Solutions
- Discuss the importance of load balancing and High Availability (HA) in a virtualization environment
- Identify Virtualization Tools such as VMWARE and Oracle Virtualbox

Applying:

- Apply Cloud Security measures including planning, Access Control, Auditing, Authentication, Authorization, Encryption, File encryption, Secure communications, Web application firewall, Data center security, Data center availability, Regular backups, and Professional best practices
- Analyze the CSA stack model and understand Brokered Cloud Storage Access

Analyzing:

- Evaluate the security measures in a Cloud Computing environment and propose improvements
- Compare and contrast different Cloud solutions and their suitability for different business needs

Evaluating:

- Assess the impact of Cloud Computing on businesses and organizations
- Critically evaluate the advantages and limitations of various Cloud Computing technologies and services

Creating:

- Design a secure Cloud Computing architecture for a specific business scenario
- Develop a plan for implementing Cloud Computing solutions based on the needs of a given organization

Select Language 

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