

CLOUD COMPUTING

COURSE OUTCOME

1. Define Cloud Computing and memorize the different Cloud service and deployment models
2. Describe importance of virtualization along with their technologies.
3. Use and Examine different cloud computing services
4. Analyze the components of open stack & Google Cloud platform and understand Mobile Cloud Computing
5. Describe the key components of Amazon web Service
6. Design & develop backup strategies for cloud data based on features

COURSE OUTLINE

Module 1

Understanding cloud computing: Cloud Computing – History of Cloud Computing – Cloud Architecture – Cloud Storage – Why Cloud Computing Matters – Advantages of Cloud Computing – Disadvantages of Cloud Computing – Companies in the Cloud Today – Cloud Services understanding cloud services: Web-Based Application – Pros and Cons of Cloud Service Development – Types of Cloud Service Development – Software as a Service – Platform as a Service – Infrastructure as a service Web Services – On-Demand Computing – Discovering Cloud Services Development Services and Tools – Amazon Ec2 – Google App Engine – IBM Clouds.

Module 2

Webservices, AJAX and mashups-Web services: SOAP and REST, SOAP versus REST, AJAX: asynchronous 'rich' interfaces, Mashups: user interface services Virtualization Technology: Virtual machine technology, virtualization applications in enterprises, Pitfalls of virtualization Multitenant software: Multi-entity support, Multi-schema approach, Multitenance using cloud data stores, Data access control for enterprise applications

Module 3

Cloud security fundamentals, Vulnerability assessment tool for cloud, Privacy and Security in cloud, Cloud computing security architecture: Architectural Considerations- General Issues, Trusted Cloud computing, Secure Execution Environments and Communications, Micro-architectures; Identity Management and Access control, Identity management, Access control, Autonomic Security, Cloud computing security challenges: Virtualization security management virtual threats, VM Security Recommendations, VM-Specific Security techniques, Secure Execution Environments and Communications in cloud.

Module 4

Communicating with the cloud,media and streaming,Managing cloud services:Examining organizatinas issues, Looking at the technical interface,Managing cloud resources,Administering cloud services,,Cloud management standards,Monitoring the cloud .Migrating to the cloud:cloud services for individuals,enterprise class cloud offerngs,migrationBroad Approaches to Migrating into the Cloudhe Seven-Step Model of Migration into a Cloud,mobile clouds and mobile webservices,best practices,enterprise cloud computing ecosystem