

# Cloud Computing

## Cloud Computing

- Cloud Computing definition, characteristics
- Cloud service Models (SAAS, PAAS, IAAS)
- Organizational Cloud Types (Private, Public, Hybrid)
- Benefits and limitations of Cloud
- Comparison of SAAS, PAAS, IAAS
- Utility Computing
- Elastic Computing

## Data in the Cloud

- Relational Database
- Cloud File Systems: GFS and HDFS, Big Table, HBase and Dynamo
- Map-Reduce –Model and Its Extensions

## Importance of Virtualization in cloud computing

- Virtualization Basics
- Objectives
- Benefits of Virtualization
- Emulation
- Virtualization for Enterprise
- VMware
- Xen

## Cloud Platforms

- Introduction to all available cloud Platforms and its utilization
- Amazon web services
- Google App Engine
- Windows Azure
- Salesforce
- Encalyptus

## Cloud Security

- Cloud Security Fundamentals
- Vulnerability Assessment Tool For Cloud
- Privacy and Security in Cloud
- Cloud Security Architecture
- Identity Management and Access control
- Cloud computing security challenges.

## **Issues in Cloud Computing**

- Issues in Inter cloud computing
- Quality of services in cloud Computing
- Data Migration in Cloud
- Streaming in Cloud
- Monitoring in Cloud Environment
- Resolving Issues

## **Google Cloud Platform**

- GAE Overview and its features
- GAE Architecture
- Runtime environments
- Installation of GAE
- Data Storage in App Engine
- GAE Services
- Implementation of Google Application
- Deployment of Application on GAE cloud

## **Microsoft Azure Cloud Platform**

- Azure Introduction
- Azure Architecture
- Azure Web Roles (Configuration, Endpoints, Security, Logging, Load Balancing)
- Azure installation
- Azure Application architecture
- Azure Storage
- SQL Azure
- Publishing to the cloud

## **Amazon Cloud**

- AWS Overview
- Installation of AWS
- Architecture of AWS
- Amazon Simple DB
- Amazon EC2
- Amazon Map Reduce
- Amazon S3
- Amazon Networking
- Application development On Amazon Cloud
- Deployment on Amazon cloud