INT330:MANAGING CLOUD SOLUTIONS

L:2 T:0 P:2 Credits:3

Course Outcomes: Through this course students should be able to

CO1 :: describe cloud services offered by cloud providers, such as Amazon AWS

CO2 :: define the cloud service implementations

CO3 :: understand cloud services offered by cloud providers, such as Amazon

CO4 :: analyze various Compute Engine services in AWS

CO5 :: examine Storage Volume and Elastic Compute Cloud creation and its management.

CO6 :: describe the benefits of Auto Scaling and Elastic Load Balancer feature in AWS platform

Unit I

Cloud Concepts Overview : Introduction to cloud computing, Introduction to AWS, Moving to the AWS Cloud, Cloud Economics and Billing, Fundamentals of pricing, Total cost of ownership, AWS Organizations, AWS billing and cost management

Unit II

AWS Global Infrastructure Overview : AWS global infrastructure, AWS services and service categories, AWS Management Console, AWS shared responsibility model, AWS IAM, Securing a new AWS account

Unit III

Cloud Security and Networking : Securing accounts, Securing data, Working to ensure compliance, Networking basics, Amazon VPC, VPC networking, Amazon VPC Console, VPC security, Route 53, CloudFront

Unit IV

Compute : Compute services overview, Amazon EC2, Amazon EC2 Versus Managed Services, Amazon EC2 cost optimization, Container services, Introduction to AWS Lambda, Introduction to AWS Elastic Beanstalk

Unit V

Storage and Databases : Amazon Elastic Block Store Console, AWS S3, AWS EFS, AWS S3 Glacier, Storage Technology Selection, Amazon RDS, Build a Database Server, Amazon DynamoDB, Amazon Redshift, Amazon Aurora

Unit VI

Cloud Architecture : AWS Well-Architected Framework design principles, Operational excellence, Security, Reliability, Performance efficiency, Cost optimization, Reliability & high availability, AWS Trusted Advisor Elastic Load Balancing, Amazon CloudWatch, Amazon EC2 auto scaling

List of Practicals / Experiments:

List of Practicals

- AWS billing and cost management
- Billing dashboards
- AWS IAM
- Amazon VPC
- CloudFront
- AWS Lambda
- AWS Elastic Beanstalk
- Amazon EC2 cost optimization
- Container services
- Build a Database Server
- Amazon Elastic Block Store Console

- AWS S3, AWS EFS, AWS S3 Glacier, Storage Technology
- Amazon DynamoDB, Amazon Redshift, Amazon Aurora
- AWS Load Balancing
- AWS EC2 Autoscaling

References:

1. CLOUD COMPUTING, A PRACTICAL APPROACH by TOBY VELTE, ANTHONY VELTE, ROBERT C. ELSENPETER, MC GRAW HILL