Department: CSE | Date: 20th July to 1st August, 2020

A Two-Week Workshop on "AWS Cloud Computing"

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Two-Week Online Workshop on **"AWS Cloud Computing"** was organized by department of Computer Science and Engineering of Sree Vidyanikethan Engineering College for the benefit of students of CSE, IT, CSSE from 20th July to 1st August, 2020 in collaboration with APSSDC. Program was organized with batch of 75 students and it was coordinated by **Dr. M. Sakthivel**, Assoc. Professor, Department of Computer Science and Engineering.

The objective of the workshop is to

- Make architectural decisions based on AWS architectural principles and best practices
- Leverage AWS services to make your infrastructure scalable, reliable, and highly available
- Leverage AWS Managed Services to enable greater flexibility and resiliency in an infrastructure
- Make an AWS-based infrastructure more efficient to increase performance and reduce costs
- Use the Well-Architected Framework to improve architectures with AWS solutions

Students have learnt to configure the following with AWS:
- Launch amazon linux ec2 instance
- Launch windows ec2 instance in aws
- Configure web server on amazon linux instance with elastic ip exercise
- Assign elastic ip address
- Manage elastic block storage(ebs)
- Configure amazon simple storage service (amazon s3) exercise
- Manage iam user, group and policies
- Configure amazon s3 glacier
- Configure amazon glacier exercise

- Configure amazon efs
- Configure amazon virtual private cloud (vpc)
- Configure amazon cloud watch
- Configure amazon simple notification service (sns) exercise
- Configure amazon elastic load balancer
- Configure amazon auto scaling with load balancer and snapshot exercise
- Configure an elastic beanstalk with tomcat application
- Configure an light saile with apache2
- Configure relational database service(rds) exercise
- Configure dynamodb
- Configure cloud formation
- Configure Simple E-Mail Service(SES)
- Configure Simple Queue Service (SQS)
- Configure Route 53
- Configure Cloudfront Service
- Deploy the wordpress website in highly scalable and highly available architecture

The resource persons are experienced trainers from APSSDC, Govt. of Andhra Pradesh. They interactively demonstrated, taught and inculcated to the students the working with the application. The feedback from participants has been taken to understand and analyze the resource persons' domain knowledge, content delivery, and interaction during the workshop, can enable the department to organize such workshops in future. Overall, the event was successful.

Outcomes:

➢ Use AWS Identity and Access Management (IAM) for service authentication

➢ Use Amazon Simple Storage Service (Amazon S3) and Amazon DynamoDB as data stores

➢ Integrate applications and data by using AWS Lambda, Amazon API Gateway, Amazon Simple Queue Service (Amazon SQS), Amazon Simple Notification Service (Amazon SNS), and AWS Step Functions

➢ Use Web Identity Framework and Amazon Cognito for user authentication

➢ Use Amazon Elasti-Cache to improve application scalability

➢ Use containers in the development process

HOD, CSE