 **GANESH**

*Training & Consulting*

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Amazon Web Services (AWS) And Devops

Introduction to Cloud Computing

* A Short history
* Client Server Computing Concepts
* Challenges with Distributed Computing
* Introduction to Cloud Computing
* Why Cloud Computing?
* Benefits of Cloud Computing

Cloud Computing Deployment Models

* Private Cloud
* Public Cloud
* Hybrid Cloud

Cloud Delivery/Service Models

* Software as a Service (SaaS)
* Platform as a Service(PaaS)
* Infrastructure as a Service (IaaS)

Linux Basics

* Linux basic Commands
* Linux basic Administration

Amazon Web Services(AWS)

Introduction to AWS services

* Amazon Elastic Compute Cloud(EC2)
* Amazon Simple Storage Service (S3)
* Elastic Block Storage (EBS)
* Elastic Load Balancing (ELB)
* Amazon Relational Database Service (RDS)
* Auto Scaling
* Identity and Access Management (IAM)
* Virtual Private Cloud (VPC)
* Cloud Formation
* Simple Email Services (SES)
* Simple Queue Services (SQS)
* Simple Notification Services (SNS)
* Server less computing (Lambda)
* Elastic Beanstack
* Cloud Front
* Route-53
* Glacier

Introduction to AWS

* Subscription to AWS
* Introduction to the AWS Management Console

**Abstracts:**

***1. Introduction to Cloud Computing***

**Learning Objectives -** What Cloud Computing and what are the different models of Cloud Computing along with the key differentiators of different models, services and concepts.

**Topics** - Introduction to Cloud Computing, AWS Architecture, AWS Management Console, Setting up

AWS Account.

***2. Amazon EC2 and Amazon EBS***

**Learning Objectives -** Introduction to compute offering from AWS EC2. Different instance types and Amazon AMIs. A demo on launching an AWS EC2 instance, connect to an instance and hosting a website on AWS EC2 instance. We will also cover EBS storage Architecture (AWS persistent storage) and the concepts of AMI and snapshots.

**Topics -** Amazon EC2, Amazon EBS, Demo of AMI Creation, Backup, Restore, EC2 Services and EBS

persistent storage.

***3. Amazon Storage Services: S3, RRS, CloudWatch***

**Learning Objectives -** Various kind of scalable storage services like S3, RRS and learn how to host a static website on AWS. Monitoring AWS resources and setting up alerts and notifications for AWS resources and AWS usage billing with AWS CloudWatch.

**Topics -** AWS Storage Services: S3, RRS & Glacier, Amazon Cloud Watch, Alerts, Notification.

***4. Scaling and Load Distribution in AWS***

**Learning Objectives -** 'Scaling' and 'Load distribution techniques' in AWS. A demo of Load distribution

& Scaling resources horizontally based on time or activity.

**Topics -** Amazon Scaling Service: ELB and Auto Scaling.

***5. AWS VPC & Route 53***

**Learning Objectives -** Introduction to Amazon Virtual Private Cloud. We will cover how you can make public and private subnet with AWS VPC. A demo on creating VPC, overview of AWS Route 53.

**Topics -** Amazon VPC with subnets, Gateways, Route tables and Amazon Route 53 overview.

***6. Identity and Access Management (IAM) Techniques and Managed***

***Relational Database (RDS)***

**Learning Objectives -** Distribution of access control with AWS using IAM. We will talk about the managed relational database service of AWS called RDS.

**Topics -** Amazon IAM Overview, Amazon RDS.

**Devops Course Content**

**Git and GitHub:- Source Code management**

**Git Over view :-**

* + Understanding Version control
  + Git work flow

**Install git and working on Git :-**

* + Install git on windows machine
  + Create repository
  + Working with files
  + Working with branches

**GitHub over view :-**

* + Understanding Git Hub
  + Create a Public repository

**Jenkins** : **CI/ CD Purpose**

* Continuous integration and continuous delivery
* Jenkins installation and configuration
* Free style project creation

**Ansible :-**

**Ansible Introduction :-**

* + What Is Ansible?
  + Change Management
  + Automation
  + YAML
  + Architecture Introduction

**Ansible installation and modules: -**

 Installing Ansible

 Testing Lab with Your First Ansible Commands

 Ansible Modules Introduction

**Working on Anisble :-**

 Plays and Playbook Basics

 Playbook Logic and More

 Introduction to Roles

 Demo: Creating Roles

 Ansible Galaxy Introduction

**Docker :-**

**Docker over view: -**

* + What is Docker
  + What is container (compare with VM)
  + Why we need to use containers

**Docker setup: -**

* + Installation
  + Download images
  + Setup container

**Working on containers and Images :-**

* + Build Own Image
  + Container Port mapping
  + Run HTTPD container (with test page )
  + Local volume mapping
  + Docker Volume mapping