Google cloud

Google Cloud Platform Introduction

- What is Cloud compute
- Overview of different cloud computing services
- Understand GCP environment
- Different Compute, Storage, Big Data and AI resources which GCP offers
- Google Network Service Offerings
- Setup GCP account

Topics:

- Google Cloud Platform (GCP) Infrastructure
- Compute resources
- Networking Services
- Storage and Database offering
- Bigdata and AI services
- Basics of GCP Project
- Introduction to Primitive role.

Managing GCP Services

- Cloud Shell, Gcloud, Gsutil. Also, you will learn how to install and configure Cloud SDK.
- Objective: Upon completing this module, you should be able to understand:
- How to manage GCP using GCP console
- How to use Cloud Shell to manage GCP environment
- How to use Gcloud tool to manage GCP environment
- How to use Gsutil tool to manage cloud storage
- Install/configure cloud SDK

Topics:

- Managing GCP environment with GCP console
- Control GCP environment using CLI
- GCP environment management using Cloud Shell
- GCP environment management using Gcloud
- GCP environment management using Gsutil
- Install and configure cloud SDK

GCP Networking Services

- policies and firewall.
- How to use VPC
- Create/Manage VPN
- How to use cloud router

- Create/Modify Firewall policies
- Work with Routes
- Configure and Deploy Endpoints

Topics:

- Cloud Virtual Network
- Virtual Private Network
- Virtual Private Cloud
- Proxies / Gateway and Endpoints
- Network/Subnetwork
- DNS Resolution
- Firewalls and Routes
- Cloud Router
- Interconnecting networks
- Security aspect

Security aspect of GCP

- Understand Identity and Access Management
- IAM Role – Primitive, Predefined, Custom
- IAM Policy and Policy Hierarchy
- Best Practices for IAM role, policy and service account
- Create and manage permissions for Google Cloud Platform resources

Topics:

- Understand Identity and Access Management (IAM)
- Understanding Organizations, Roles, Members, Service accounts, Policy
- Policy Hierarchy
- Understanding different role and permission
- Creating custom role
- Basic IAM APIs
- Best Practices
- Key Management Systems
- Data security
- Resource Sharing and Isolation
- Auditing
- Penetration testing
- Security controls

GCP Compute Services

- Create Virtual Machine and VM instances

➢ Working with VM

Topics:

➢ Understand Compute Engine
➢ Understand and implement Compute options (vCPU and Memory) specific to workload
➢ Persistent disk – HDD, SSD
➢ Load Balancing
➢ Common Compute Engine actions

GCP Storage & Database Services

➢ How to store data, How to retrieve data
➢ Archiving cold data, Managing rich content, How to host your website

Topics:

➢ Understand Cloud Storage – Nearline, Coldline
➢ Cloud SQL
➢ Cloud Spanner, Cloud Datastore
➢ Cloud Bigtable
➢ Pros and cons of storage option and how to choose
➢ Understanding Billing aspect of storage options
➢ Tradeoff of storage options
➢ Integration with on premises/multi-cloud environment

Containers

➢ How to deploy application using Kubernetes

Topics:

➢ Understand Containers and their benefits
➢ Kubernetes Engine, Container Registry
➢ How to use Kubernetes Load Balancing
➢ How to choose Kubernetes Engine, App Engine, or Containers on Compute Engine

Cloud Dataflow for Data Processing

➢ How to create a maven project with Dataflow SDK
➢ How to create and execute streaming pipeline using Dataflow template
➢ How to create pipeline on Beam
➢ Testing pipeline
➢ Create/Manage/Delete cluster using Dataproc service
➢ How to run a job on cluster
➢ Using APIs to automate jobs

Topics:

- Dataflow services
- Stream and Batch processing
- Apache Beam SDK
- Monitoring using Stackdriver
- Data transformation with Cloud Data flow
- Working with Dataproc
- Creating Cluster
- Managing cluster
- Automation of jobs

GCP DevOps Services

- How to create/configure Jenkins service on GCP
- Jenkins deployment

Topics:

- Setup CI/CD
- Setting up Jenkins on Container engine
- Deploy application on Jenkins
- Create deployment pipeline in Jenkins
- Create and Deploy on cluster
- Deploy development and production environment
- Analysis & Troubleshooting

Designing & Implementing GCP Migration

- GCP.
- Different critical KPIs, Metrics, Analytics
- How to take decision to migrate to GCP
- How to choose from different options as per specific need
- How to manage scalability
- Hybrid model
- How to move completely from on-prem to GCP

Topics:

- Collect and Analyze metrics
- Evaluate and choose an automation framework for provisioning resources in cloud
- Design strategy
- Create Migration Plan

Flat No: 506,5th Floor, Nilgiri Block, Aditya Enclave, Ameerpet, Hyd -5000038.
Contact: +91 9032734343, Mail: info@vritsol.com www.vritsol.com