

Introduction to Google Cloud Platform

- Introduction to Cloud Computing
- Overview of Google Cloud Platform
- Google Cloud Account Creation
- Overview of Billing and credits

An Overview of GCP Services

- Identity and Access Management
- Networking
- Compute
- Databases
- Storage
- Analytics
- DevOps and CI/CD

GCP Global Infrastructure

- Overview of Google Cloud Infrastructure
- Data Centers
- Regions
- Availability Zones
- Google Edge Locations

GCP Console Overview:

- Learning about GCP Console
- Using console
- GCP Management
- GCP Project settings
- GCP Organization settings

GCP Cloud CLI and Cloud Shell

- Installation
- Configuration
- Accessing GCP Resources
- gcp commands over CLI
- gcp commands over Cloud Shell

GCP Identity and Access Management (IAM)

- What is Identity and Access Management
- Organizations
- Projects
- Roles
- Members
- Service Accounts
- Keys
- API
- Cloud IAM best practices

GCP Networking Module - Virtual Networks

- What is GCP Virtual Networks?
- Virtual Private Cloud (VPC)
- Subnetworks
- IP addresses
- Routes
- Firewall rules

- Load Balancers
- Autoscaling
- Bastion Host
- DNS Servers resolution with VNET
- VNET endpoint resolution with Public IP

GCP Compute Engine Module – Compute Instance Windows

- Launching Public Subnet Windows VMs
- Launching Private Subnet Windows VMs
- Connections to Windows VMs
- Webserver Installation
- Deployment a Sample Application
- Resolution of Sample Application

GCP Compute Engine Module – Compute Instance Linux

- Launching Linux VMs in Cloud
- SSH to Linux VM in Cloud
- Webserver Installation
- Configure Apache
- Deployment of Sample Application
- Resolution of Sample Application

GCP Compute Module-App Engine Module

- About Google App Engine (GAE)
- Application Development in GAE
- Developing Spring Boot application
- Deploying apps to GAE
- Deploy apps using SDK
- Deploy apps using CLI and CloudShell

GCP DNS-CLOUD DNS

- What is DNS?
- How DNS Works?
- Understanding about DNS records
- Alias Records

GCP DNS -DNS ZONE Resolution

- Create a DNS Zone
- Configuration with different Policies
- Create Traffic Manager Profile
- Resolution of DNS Zone with Public IP
- Resolution of DNS Zone with Load Balancer

GCP Storage-Google Cloud Storage

- An Overview of Cloud Storage
- Types of Storages
- Block Storage
- File Storage
- Buckets
- Files
- Objects
- Using SDK, CLI and Cloud Shell

GCP SQL Databases-Google Cloud SQL

- What is GCP Cloud SQL?
- CloudSQL and MySQL
- Cloud SQL and PostgreSQL
- Configure the server firewall
- Loading Data to CloudSQL
- Query data from CloudSQL
- CRUD operations to CloudSQL
- Cloud Spanner
- Cloud Datastore
- Cloud Bigtable
- Big Query

GCP-Functions-Function as a Service-Cloud Functions

- Introduction to Cloud Functions
- Benefits for using Cloud Functions
- Implement a project using Cloud Functions
- Learning about Cloud Functions

GCP Serverless-Serverless Computing with Cloud Functions

- Introduction to Serverless Computing
- Serverless with Cloud Functions
- Real Time applications with Cloud Functions

GCP Containerization-DOCKER

- What is Docker
- Installing Docker on Windows, Linux
- Docker Pull, Build, Run
- Working with images
- Container Life cycle
- Dockerfile
- Pushing App to GitHub

GCP-Containers-GCP Cloud Run

- An Overview of GCP Cloud Run
- Using GCP Cloud RUN
- Deliver Cloud RUN
- Deploying apps to Cloud RUN

GCP-Container Orchestration-GCP Kubernetes Engine

- What is Kubernetes?
- Kubernetes Architecture
- Nodes
- Pods
- Services and Deployment
- GCP Kubernetes Engine
- Pushing App to Kubernetes Cluster

GCP Resource Management

- Cloud Resource Manager
- Quotas
- Labels
- Names
- Billing

GCP Resource Monitoring

- Monitoring
- Resource Monitoring
- Logging
- Error Reporting
- Tracing, Debugging
- Error Reporting and Debugging

GCP Infrastructure Automation with Google Cloud Platform APIs

- Infrastructure automation
- Images
- Metadata
- Scripts
- Google Cloud API

GCP-Infrastructure Automation with Deployment Manager

- Deployment Manager
- Configuration
- Cloud Launcher
- Deployment Manager

GCP Messaging Services-Cloud Pub/Sub

- Real Time Messaging with Pub/Sub
- Pub/Sub Basics
- Working with Cloud Pub/Sub
- Pub/Sub Stackdriver Metrics
- Pub/Sub IAM Roles
- Loosely Coupled Services with Cloud Pub/Sub
- Stream Data through Cloud Pub/Sub to BigQuery

GCP Streaming Analytics - Cloud Dataflow

- Pipelines with Cloud Dataflow
- Dataflow Introduction
- Apache Beam overview
- Apache Beam programming model
- Pipeline Lifecycle
- Dataflow Pipeline Concepts
- Dataflow Security and Access
- Using Dataflow and Deploying a pipeline
- Working with Cloud Dataflow
- Streaming Pipelines with Cloud Dataflow
- Create Streaming Data Pipeline on GCP with Cloud Pub/Sub, Dataflow, and BigQuery

GCP DMS Services-Database Migration Services

- Database Migration Service overview
- Database Migration Service for MySQL QuickStart
- Tools
- Case Studies

GCP Fully Managed Hadoop and Spark Clusters-DataProc

- Managed Spark with Cloud Dataproc
- Dataproc Overview
- Dataproc Basics
- Working with Cloud Dataproc
- Submitting jobs to Cloud Dataproc
- Dataproc Cluster Properties

- Dataproc IAM
- Autoscaling Clusters

GCP Cloud Data Fusion [Google CDAP]

- Cloud Fusion Overview
- Creating a Cloud Data Fusion instance
- Creating a private instance
- Using JDBC drivers with Cloud Data Fusion
- Access control
- Enabling and disabling Cloud Data Fusion
- Granting service account user permission
- Viewing pipeline logs in Cloud Logging
- Using VPC Service Controls with Cloud Data Fusion
- Apache Airflow Environment.

GCP Data Catalog

- Overview of Data Catalog
- tagging datasets
- How to search with Data Catalog
- Restricting access with BigQuery column-level security
- Access on-premises metadata connectors on GitHub

GCP Cloud Scheduler

- Cloud Scheduler overview
- Setup
- Enable Cloud Scheduler API
- Set up Cloud Pub/Sub
- Jobs Creation
- Verifying the results in Cloud Pub/Sub

GCP Data Visualization Services

- An Overview of GCP Data Studio
- Reporting and Business Intelligence
- Data Distributions
- Charts and Filters

GCP NO SQL Databases-Google Cloud Firestore

- What is NoSQL
- NoSQL on GCP
- About GCP Firestore
- Build apps using Firestore
- Loading Data to CloudSQL
- Query data from CloudSQL
- CRUD operations to CloudSQL

GCP Datastorage-Data Lake

- Introduction to Data Lakes.
- Data Storage and ETL options on GCP.
- Building a Data Lake using Cloud Storage.
- Securing Cloud Storage.
- Storing All Sorts of Data Types.
- Cloud SQL as a relational Data Lake.

Cloud Dataflow Streaming Features

- Processing Streaming Data.
- Cloud Dataflow Streaming Features.

Introduction to Analytics and AI

- What is AI?
- From Ad-hoc Data Analysis to Data Driven Decisions
- Options for ML models on GCP
- Prebuilt ML model APIs for Unstructured Data
- Unstructured Data is Hard
- ML APIs for Enriching Data

GCP Big Data Analytics with Cloud AI Platform Notebooks

- What's a Notebook?
- Big Query Magic and Ties to Pandas
- Big Query ML for Quick Model Building
- Supported Models

Production ML Pipelines with Kubeflow

- Ways to do ML on GCP
- Kubeflow
- AI Hub

Custom Model building with Cloud AutoML

- Why Auto ML?
- Auto ML Vision
- Auto ML NLP
- Auto ML Tables