

## Google Cloud & DevOps

*“Change is the end result of all true learning.”*

ZebLearn is an ISO 9001-2015 Certified Company that is co-founded by highly experienced industry professionals and alumni of top universities. It is headquartered at Noida & It is one of the fastest-growing solution providers in the field of Education, IT, Consulting and Corporate Trainings.



+91 72778 77778



info@zeblearn.com



www.zeblearn.com

# Google Cloud Syllabus

## Essential Cloud Infrastructure: Foundation

- ❖ Introduction to Google Cloud Platform
- ❖ Google Cloud Platform (GCP) Infrastructure
- ❖ Using GCP
- ❖ Lab: Console and Cloud Shell
- ❖ Demo: Projects
- ❖ Lab: Infrastructure Preview

## Virtual Networks

- ❖ Virtual Private Cloud (VPC), Projects, Networks, Subnetworks, IP addresses, Routes, Firewall rules
- ❖ Subnetworks for resource management instead of physical network topology
- ❖ Lab: Virtual Networking
- ❖ Lab: Bastion Host

## Virtual Machines

- ❖ Compute Engine
  - ❖ Lab: Creating Virtual Machines
  - ❖ Compute options (vCPU and Memory)
  - ❖ Images
  - ❖ Common Compute Engine actions
  - ❖ Lab: Working with Virtual Machines
- Essential Cloud Infrastructure: Core Services

## Cloud IAM

- ❖ Organizations, Roles, Members, Service accounts, Cloud IAM best practices
- ❖ Lab: Cloud IAM

# Google Cloud Syllabus

## Data Storage Services

- ❖ Cloud Storage
- ❖ Lab: Cloud Storage
- ❖ Cloud SQL
- ❖ Lab: Cloud SQL
- ❖ Cloud Spanner, Cloud Data store
- ❖ Lab: Cloud Data store
- ❖ Cloud Bigtable

## Resource Management

- ❖ Cloud Resource Manager, Quotas, Labels, Names, Billing
- ❖ Demo: Billing Administration
- ❖ Lab: Examining Billing Data with BigQuery

## Resource Monitoring

- ❖ Stackdriver, Monitoring
- ❖ Lab: Resource Monitoring (Stackdriver)
- ❖ Logging, Error Reporting, Tracing, Debugging
- ❖ Lab: Error Reporting and Debugging (Stackdriver) Elastic Cloud Infrastructure: Scaling and Automation

## Interconnecting Networks

- ❖ Cloud Virtual Private Network (VPN)
- ❖ Lab: Virtual Private Networks (VPN)
- ❖ Cloud Router, Cloud Interconnect, External Peering, Cloud DNS

# Google Cloud Syllabus

## Load Balancing

- ❖ Managed Instance Groups, HTTPS load balancing, Cross-region and content-based load balancing, SSL proxy/TCP proxy load balancing, Network load balancing
- ❖ Lab: VM Automation and Load Balancing

## Autoscaling

- ❖ Autoscaling, Policies, Configuration
- ❖ Lab: Autoscaling

## Infrastructure Automation with Google Cloud Platform APIs

- ❖ Infrastructure automation, Images, Metadata, Scripts, Google Cloud API
- ❖ Lab: Google Cloud Platform API Infrastructure Automation

## Infrastructure Automation with Deployment Manager

- ❖ Deployment Manager, Configuration, Cloud Launcher
- ❖ Lab: Deployment Manager

## Managed Services

- ❖ Cloud Dataproc, Cloud Dataflow, BigQuery, Cloud Datalab Elastic Cloud Infrastructure: Containers and Services

## Application Infrastructure Services

- ❖ Cloud Pub/Sub, API Management, Cloud Functions, Cloud Source Repositories, Specialty APIs

## Application Development Services

- ❖ App Engine





# Google Cloud Syllabus

## Containers

- ❖ Containers, Kubernetes Engine, Container Registry
- ❖ Lab: Kubernetes Load Balancing
- ❖ Kubernetes Engine, App Engine, or Containers on Compute Engine?



# DevOps Syllabus

## DevOps Essentials

- ❖ Why DevOps?
- ❖ What is DevOps?
- ❖ Agile and DevOps
- ❖ DevOps Lifecycle
- ❖ DevOps Market Trends
- ❖ DevOps Delivery Pipeline
- ❖ DevOps Ecosystem & Use Case
- ❖ Introduction to Virtualization
- ❖ Introduction to Cloud Computing

## Managing Source Code - Git and GitHub

- ❖ Overview of Version Control systems
- ❖ Central vs Distributed Control systems
- ❖ Introduction to Git
- ❖ Git file workflow
- ❖ Important Git Commands
- ❖ Branching and Merging, Stashing, Rebasing, Reverting and Resetting
- ❖ Introduction to GitHub
- ❖ Using Git and GitHub together

## Understanding and using Build tools

- ❖ Overview of Various Build tools
- ❖ What is Maven
- ❖ Maven Plugins
- ❖ Maven Archetypes
- ❖ Project Object Model (POM)
- ❖ Source Control Integration



# DevOps Syllabus

## Containerization basics using Docker

- ❖ What and Why of Containers
- ❖ Difference between VMs and Containers
- ❖ Docker Architecture and Components
- ❖ Image Distribution using Docker Hub
- ❖ Working with Containers and Docker Hub

## Continuous Integration using Jenkins

- ❖ Overview of Continuous Integration
- ❖ Overview of Jenkins
- ❖ Jenkins architecture
- ❖ Installing and Configuring Jenkins
- ❖ Jenkins Management
- ❖ Jenkins Build Pipeline



# Google Cloud & DevOps Syllabus



**Thanks you**

*Now or Never*



+91 72778 77778



info@zeblearn.com



www.zeblearn.com