GCP & DevOps Course in Chennai

Learn Google Cloud and DevOps in Chennai with Real-Time Projects and Placement Support.

A structured, hands-on course covering core Google Cloud Platform infrastructure services and industry-standard DevOps tools - from provisioning and networking to CI/CD, containers and observability. Build a solid GCP foundation with Compute Engine, Cloud Storage, VPC, IAM, Cloud SQL, Cloud Run, GKE and more, then automate deployment, scaling and monitoring with Git, Jenkins, Docker, Kubernetes, Terraform, Prometheus and Grafana.

Your Trainers

Malarvizhi — Multicloud & DevOps Engineer
6+ Years of Industry Experience

Course Curriculum

Part A: GCP Infrastructure Services 10 Modules · 32 Hrs

Core Google Cloud Platform services for compute, storage, networking and data.

1. Compute Engine (GCE) 4 Hrs

- Introduction to GCE — VM instances and machine types
- Custom images, snapshots and persistent disks
- Instance templates and managed instance groups (MIGs)
- Autoscaling and load balancing basics
- SSH access, startup scripts and billing/quotas

2. Cloud Storage (GCS) 3 Hrs

- Buckets, objects and storage classes (Standard, Nearline, Coldline, Archive)
- Access control: IAM vs ACLs, signed URLs
- Versioning, lifecycle management and retention policies
- Static website hosting and data transfer options

3. Virtual Private Cloud (VPC) 4 Hrs

- VPC networks, subnets and IP addressing
- Firewall rules and routes
- VPC peering and shared VPC
- Cloud NAT and Cloud VPN/Interconnect overview
- Private Google Access and Serverless VPC Access

4. Identity and Access Management (IAM) 3 Hrs

- IAM roles: basic, predefined and custom roles

- Service accounts and key management
- IAM policies, policy bindings and organization hierarchy
- Best practices for least-privilege access

5. Cloud SQL 3 Hrs

- Managed relational databases: MySQL, PostgreSQL, SQL Server
- Creating instances, connectivity and authorized networks
- Backups, point-in-time recovery and high availability
- Read replicas and connection from GCE/GKE/Cloud Run

6. Cloud Run 3 Hrs

- Serverless container deployment fundamentals
- Building and deploying containerized services to Cloud Run
- Traffic splitting, revisions and autoscaling
- Connecting Cloud Run to Cloud SQL and other services

7. Cloud Functions 2 Hrs

- Event-driven serverless functions overview
- HTTP-triggered and background (event-triggered) functions
- Deploying and versioning functions
- Use cases: automation, triggers, lightweight APIs

8. Google Kubernetes Engine (GKE) 5 Hrs

- GKE cluster architecture: Standard vs Autopilot
- Creating clusters and node pools
- Deploying workloads: Deployments, Services, Ingress
- Scaling, rolling updates and namespaces
- Integrating GKE with Cloud Load Balancing and IAM

9. Cloud Monitoring & Cloud Logging 3 Hrs

- Overview of Google Cloud's Operations Suite
- Metrics, dashboards and uptime checks
- Alerting policies and notification channels
- Log-based metrics and log exploration

10. Cloud DNS 2 Hrs

- Managed public and private DNS zones
- Creating and managing DNS records
- Routing policies (geo, weighted, failover)
- Integrating Cloud DNS with GCE, GKE and load balancers

Part B: DevOps Tools & Practices 7 Modules · 31 Hrs

Industry-standard tools for source control, CI/CD, containers, IaC and observability.

1. Git & Version Control 3 Hrs

- Git fundamentals: init, clone, add, commit, push, pull

- Branching strategies: feature branches, Git Flow, trunk-based development
- Merge conflicts, rebasing and cherry-picking
- Working with remote repositories (GitHub/GitLab/Bitbucket)

2. Jenkins — CI/CD Automation 5 Hrs

- Jenkins architecture: master/agent, plugins
- Freestyle jobs vs declarative Jenkins pipelines
- Jenkinsfile: stages, steps and post actions
- Integrating Jenkins with Git, Docker and GCP
- Webhooks, build triggers and credentials management

3. Docker — Containerization 4 Hrs

- Docker fundamentals: images, containers, Dockerfile
- Building, tagging and pushing images to a registry (Artifact Registry/Docker Hub)
- Docker networking and volumes
- Multi-stage builds and image optimization

4. Kubernetes — Container Orchestration 5 Hrs

- Kubernetes architecture: pods, nodes, control plane
- Deployments, Services, ConfigMaps and Secrets
- kubectl fundamentals and YAML manifests
- Helm basics for package management
- Deploying and managing workloads on GKE

5. Terraform — Infrastructure as Code 5 Hrs

- Introduction to Infrastructure as Code and Terraform basics
- Providers, resources, variables and state management
- Provisioning GCP resources: GCE, VPC, GKE, Cloud SQL with Terraform
- Modules, workspaces and remote state (GCS backend)
- Terraform plan/apply/destroy workflow in CI/CD

6. Prometheus & Grafana — Monitoring 4 Hrs

- Prometheus architecture: exporters, scraping and metrics
- Writing PromQL queries and setting up alert rules
- Integrating Prometheus with GKE and cloud infrastructure
- Building Grafana dashboards and visualizations
- Alerting and notification integrations

7. Real-Time Project & Capstone 5 Hrs

- End-to-end project: provisioning GCP infra with Terraform
- Building a Jenkins CI/CD pipeline for a containerized application
- Deploying to GKE with automated rollouts
- Setting up monitoring with Prometheus & Grafana
- Mock interview questions and project portfolio building

Projects & Hands-On Labs

Provision GCP Infrastructure with Terraform
Write Terraform code to provision the VPC, Compute Engine, GKE cluster and Cloud SQL, with remote state in a GCS backend.

Jenkins CI/CD Pipeline for a Containerized App
Build a declarative Jenkins pipeline that pulls from Git, builds and tags a Docker image, and pushes it to Artifact Registry.

Deploy to GKE with Automated Rollouts
Deploy the application to GKE with Deployments, Services and Ingress, and roll out new versions automatically from the pipeline.

Monitoring with Prometheus & Grafana
Scrape application and cluster metrics, write PromQL alert rules and build Grafana dashboards for the running system.

Enrol & Contact

Book a free demo class or a 1-on-1 counselling session.
Call / WhatsApp: +91 89399 15577
Email: contact@greenstechnologys.com
Website: www.greenstechnologys.com
25 centres across Chennai, Bengaluru, Coimbatore, Trichy and Salem, plus live online batches. Curriculum may be updated by the trainer to reflect current industry practice.