



Developing Applications with Google Cloud

Course description

In this course, you will gain a comprehensive understanding of how to design, develop, deploy, and manage applications using Google Cloud Platform (GCP). You will explore key compute options, data storage solutions, and essential development tools available on Google Cloud. The course will cover best practices for serverless, containerized, and traditional applications, focusing on scalability, reliability, and security. Additionally, you will learn about integrating DevOps principles, monitoring, and optimizing your applications for performance and cost efficiency on Google Cloud.

- **Course level:** Beginner
- **Duration:** 3 days

Activities

This course includes presentations, hands-on labs, demonstrations, and group exercises.

Course objectives

In this course, you will learn to:

- Summarize the core compute services and their appropriate use cases on Google Cloud (e.g., Compute Engine, App Engine, Cloud Run, Cloud Functions, GKE).

- Design and implement scalable and resilient application architectures using Google Cloud services.
- Choose and integrate suitable data storage solutions (e.g., Cloud SQL, Firestore, BigQuery, Cloud Storage) for various application needs.
- Develop and deploy serverless applications using Cloud Functions and Cloud Run.
- Containerize applications and deploy them efficiently using Google Kubernetes Engine (GKE).
- Implement continuous integration and continuous delivery (CI/CD) pipelines with Google Cloud Build and other developer tools.
- Monitor, log, and troubleshoot applications using Google Cloud's operations suite (Cloud Monitoring, Cloud Logging).
- Apply best practices for security, identity, and access management (IAM) in Google Cloud application development.

Intended audience

This course is intended for those involved in developing, deploying, or managing applications on Google Cloud:

- Software Developers
- Cloud Engineers
- DevOps Engineers
- Solution Architects
- Technical Project Managers
- IT Managers

Prerequisites

We recommend that attendees of this course have:

- Basic understanding of programming concepts (e.g., Python, Node.js, Java)

- Familiarity with web application development concepts (HTTP, APIs)
- Prior experience with command-line interfaces

Course outline

Module 01 – Best Practices for Cloud Application Development

Topics

- Cloud Application Development Best Practices
- Stability and Reliability Patterns

Activities

- Best Practices Discussion
- Reliability Design Workshop

Module 02 – Getting Started with Google Cloud Development

Topics

- Google Cloud SDK
- Cloud Client Libraries
- Cloud Code

Activities

- SDK Demonstration
- Cloud Code Exercise

Module 03 – Data Storage Options

Topics

- Firestore
- Cloud Storage
- Database Selection Strategies

Activities

- Firestore Lab
- Cloud Storage Exercise

Module 04 – Handling Authentication and Authorization

Topics

- Identity-Aware Proxy
- Federated Identity
- API Authentication

Activities

- Authentication Configuration Demo
- Security Workshop

Module 05 – Adding Intelligence to Your Application

Topics

- Pretrained Machine Learning APIs
- Generative AI Integration

Your course overview ends here.
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About CloudThat

Established in 2012, CloudThat is an award-winning company and the first in India to offer cloud training and consulting services for individuals and enterprises worldwide. Recently, it won Google Cloud's New Training Partner of the Year Award for 2025, becoming the first company in the world in 2025 to hold awards from all three major cloud giants: AWS, Microsoft, and Google. CloudThat notably won consecutive AWS Training Partner of the Year (APJ) awards in 2023 and 2024 and the Microsoft Training Services Partner of the Year Award in 2024, bringing its total award count to an impressive 12 awards in the last 8 years.

CloudThat specializes in Cloud Migration, Data Platforms, DevOps, IoT, and cutting-edge technologies like Gen AI & AI/ML. As a Microsoft Solutions Partner, AWS Premier Tier Training Partner, Google Cloud Platform Partner, and collaborator with leading organizations like HPE, Oracle, Nvidia and Databricks, CloudThat has trained over 850,000 professionals across 600+ cloud certifications, empowering students and professionals worldwide to advance their skills and careers.

To know more about our cloud certification training, email at sales@cloudthat.com or call us at [+91-8880002200](tel:+91-8880002200) or [+1-8555588830](tel:+1-8555588830) for those from outside India.