



GOOGLE CLOUD TRAINING

Google Cloud Professional Data Engineer

Become a Google Cloud Professional Data Engineer. Design and implement robust data processing systems on GCP.

DURATION

2 hours

LEVEL

Intermediate

FORMAT

Instructor-Led

-
- Globally Recognized Certification
 - Expert-Led Hands-On Training
 - Flexible Scheduling

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COURSE OVERVIEW

This intensive course is meticulously designed to prepare you for the Google Cloud Professional Data Engineer certification, equipping you with the expertise to design, build, operationalize, secure, and monitor data processing systems on Google Cloud Platform. You'll delve into the core technologies that power modern data engineering, including BigQuery for scalable analytics, Dataflow for powerful batch and stream processing, Dataproc for managed Apache Spark and Hadoop, Pub/Sub for real-time messaging, and Cloud Storage for robust data lakes. The curriculum emphasizes practical application, ensuring you gain hands-on experience with real-world scenarios.

Upon completion, you will not only be ready to ace the certification exam but also possess the advanced skills necessary to tackle complex data challenges in any organization leveraging Google Cloud. This certification is globally recognized, demonstrating your proficiency in transforming data into actionable insights and supporting machine learning initiatives. It's an invaluable credential for data professionals looking to specialize in cloud-native data solutions and significantly boost their career trajectory in a rapidly evolving digital landscape.

Duration	2 hours
Level	Intermediate
Vendor	Google Cloud
Exam Code	GOOGLE CLOUD

COURSE CURRICULUM

01 Module 1: Introduction to Google Cloud Data Engineering

- Overview of Google Cloud Platform (GCP) and its data ecosystem
- Role of a Professional Data Engineer on GCP
- Key data engineering concepts: batch vs. streaming, ETL/ELT
- Introduction to GCP data services: storage, processing, analytics
- GCP project structure, IAM, and resource management

02 Module 2: Designing Data Processing Systems

- Designing highly available and scalable data solutions
- Choosing appropriate GCP storage options (Cloud Storage, BigQuery, Bigtable, Cloud SQL)
- Architecting batch data pipelines (Dataflow, Dataproc)
- Designing real-time streaming data pipelines (Pub/Sub, Dataflow)
- Data governance, security, and compliance considerations

03 Module 3: Building and Operationalizing Data Pipelines

- Implementing batch data pipelines with Apache Beam on Dataflow
- Developing streaming data solutions using Pub/Sub and Dataflow
- Orchestrating workflows with Cloud Composer and Cloud Workflows
- Data validation, quality assurance, and error handling in pipelines
- Data cataloging and metadata management with Dataplex and Data Catalog

04 Module 4: Securing, Monitoring, and Optimizing Data Solutions

- Implementing security controls and IAM for data services
- Data encryption strategies (at rest and in transit)
- Logging, monitoring, and alerting with Cloud Logging and Cloud Monitoring

- Performance tuning for BigQuery, Dataflow, and other data services
- Cost optimization strategies for GCP data infrastructure

05 Module 5: Machine Learning Integration and Advanced Analytics

- Preparing data for machine learning models on GCP
- Integrating data pipelines with Vertex AI for MLOps
- Feature engineering and data transformation for ML workloads
- Introduction to Looker Studio for data visualization and reporting
- Building predictive analytics solutions with BigQuery ML

CAREER PATHWAYS

Graduates of this program are prepared for the following roles:

- > **Google Cloud Data Engineer**
- > **Cloud Solutions Architect (Data Focus)**
- > **Machine Learning Data Engineer**

FREQUENTLY ASKED QUESTIONS

Q: What prior experience or technical knowledge is recommended before enrolling in this Google Cloud Professional Data Engineer course?

While there are no strict prerequisites, candidates will benefit significantly from having 3+ years of industry experience, including 1+ years designing and managing solutions using Google Cloud. A foundational understanding of data processing concepts (ETL, data warehousing, streaming) and basic SQL knowledge is highly recommended to get the most out of this specialized course.

Q: How will this course specifically help me design and implement robust data pipelines for AI and Machine Learning applications on Google Cloud?

This course dedicates a module to integrating data pipelines with Machine Learning workflows. You will learn to prepare high-quality data for ML models, use BigQuery ML for analytical predictions, and understand how to leverage Vertex AI for MLOps. The focus is on building scalable and automated data foundations that feed directly into advanced AI solutions, ensuring your ML models receive clean, timely, and relevant data.

Q: Beyond passing the certification exam, what tangible skills will I gain to immediately apply in a professional data engineering role using Google Cloud technologies?

You will gain practical, hands-on skills in deploying and managing critical GCP data services. This includes architecting scalable data lakes and warehouses, implementing batch and real-time data processing with Dataflow and Pub/Sub, orchestrating complex workflows with Cloud Composer, securing data assets, and optimizing solution costs and performance. You'll be equipped to design, build, and maintain end-to-end data solutions on GCP, making you a valuable asset to any data-driven team.

ABOUT COMPUTER PRIDE



East Africa's Premier IT Training Center

With over 15 years of excellence, Computer Pride delivers globally recognized certification programs from leading technology vendors. Located on Kenyatta Avenue in Nairobi's CBD, our state-of-the-art facilities and expert instructors have empowered thousands of professionals across East Africa.

15+

Years of Excellence

10,000+

Professionals Trained

50+

Vendor Certifications

READY TO ENROL?

Take the next step in your technology career.

Location

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