Technical Foundations of FinOps on Google Cloud

Category: Modern Workplace & M365 | **Vendor:** Google Cloud

Duration: 16.00 hours (2 days) **13.0 CPD Hours** **Rating:** ⭐ 4.6 (5,878 reviews)

Course Information

Delivery Format: Instructor Led - Online

Course Overview

Dive deep into the technical underpinnings of FinOps and gain the expertise to optimize your cloud spending and drive business value. This comprehensive course is designed for cloud architects, engineers, and technical professionals seeking to master the tools, technologies, and strategies that empower effective cloud financial management.

About This Course

Dive deep into the technical underpinnings of FinOps and gain the expertise to optimize your cloud spending and drive business value. This comprehensive course is designed for cloud architects, engineers, and technical professionals seeking to master the tools, technologies, and strategies that empower effective cloud financial management.

Who Should Attend

- Cloud Architects
- DevOps Engineers
- Cloud Cost Analysts

Prerequisites & Entry Requirements

General Prerequisites:

Knowledge of Google cloud infrastructure as discussed in Google Cloud Fundamentals: Core Infrastructure (GCF-CI).

Learning Outcomes

Upon successful completion of this course, participants will be able to:

- Understand the core principles of FinOps and how it bridges the gap between the technology and finance in the cloud.
- Explore proven techniques to identify cost inefficiencies, optimize resource utilization, and achieve significant savings.
- Utilize advanced monitoring tools and data-driven insights to track spending patterns, forecast costs, and make informed decisions.
- Implement effective cost allocation models to accurately attribute cloud expenses to specific teams or projects.
- Leverage IaC to automate cost management processes, enforce spending policies, and ensure consistent financial governance.
- Use industry-leading FinOps platforms and tools to gain comprehensive visibility into your cloud spending and optimize resource usage.
- Apply your knowledge to real-world scenarios through hands-on exercises and case studies.
- Foster a culture of cost awareness and accountability within your organization.

Detailed Course Outline

Module 1 - Foundations of FinOps on Google Cloud

Topics:

- Financial governance challenges
- Google Cloud FinOps framework
- Cloud FinOps operating model
- Google FinOps journey

Objectives:

- Recognize financial governance challenges facing organizations today

- Understand the purpose of Google Cloud FinOps framework

- Implement the Google Cloud FinOps operating model

- Discern the three phases and five pillars of the Google FinOps journey

Module 2 - Exploring and Understanding Billing Data

Topics:

- Google Cloud Billing accounts

- Cloud Billing dashboard

- Billing account access

- Billing export to BigQuery

- Connecting Looker Studio to Billing data

Objectives:

- Understand the Google Cloud Billing account management

- Navigate the Cloud Billing dashboard

- Control access to billing accounts with IAM and permissions

- Configure and use BigQuery billing to export data

- Visualize your costs with Looker Studio

Activities:

- Lab: Exploring the Billing Dashboard

- Lab: Visualizing your Costs with Looker Studio

Module 3- Resource Labeling and Tagging

Topics:

- Labels
- Tags
- Label and tag information in billing data

Objectives:

- Utilize labels on resources
- Define and bind tags to projects and resources
- Access label and tag information in billing data

Activities:

- Lab: Tagging Resources
- Lab: Examining Labels and Tags in BigQuery Billing Data

Module 4 - Budgets and Alerting

Topics:

- Budgets and alerts
- Budget roles and permissions
- Automating budget creation

Objectives:

- Understand the benefits of budgets and alerts

- Create a budget

- Create budgets with gcloud, Python, and Terraform

Activities:

- Demo: Using gcloud and Terraform to create budgets and alerts

Module 5 - BigQuery Cost Management and Optimization

Topics:

- Query costs

- Storage costs

- Allocating

- Costs of BigQuery

- Other BigQuery costs concerns

Objectives:

- Understand BigQuery compute and storage costs

- Use queries and tools to help understand and manage BigQuery costs

- Recognize best practices for BigQuery cost management

Activities:

- Lab: Examining BigQuery Costs Across the Project, Folder, and Organization

Module 6 - Compute and GKE Cost Management and Optimization

Topics:

- Computing waste and cost management
- Compute Engine cost management
- Understanding network costs
- Google Kubernetes Engine costs management

Objectives:

- Use cloud resources efficiently and avoid waste
- Understand computing and network charges incurred in Google Cloud
- Understand additional Google Kubernetes Engine costs beyond computing and networking

Activities:

- Lab: Reviewing and Understanding Compute Billing
- Lab: Reviewing and Understanding Kubernetes Costs

Module 7 - Cloud Storage and Database Costs

Topics:

- Cloud Storage

- SQL on Google Cloud

- NoSQL on Google Cloud

Objectives:

- Optimize Cloud Storage costs based on location, access patterns, and lifecycle

- Understand SQL database costs, including Cloud SQL, AlloyDB, and Spanner

- Utilize Database Committed Use Discounts (CUD).

- Understand NoSQL database costs, including Memorystore, Firestore, and Bigtable

Activities:

- Lab: Working with Cloud Storage Cost Management

- Lab: Reviewing and Understanding Database Billing

Module 8 - Machine Learning and Vertex AI Cost Management

Topics:

- Machine learning model training and hosting

- Monitoring Vertex AI costs

- Generative AI costs

Objectives:

- Decipher charges associated with machine learning model preparation, training, and hosting

- Understand costs associated with generative AI usage, including subscriptions and API usage

Activities:

- Lab: Reviewing Vertex AI Costs in Billing Data

Module 9 - Automating Billing Activities

Topics:

- Automating resource management
- Cloud asset inventory service
- Programmatic actions on budget alerts
- Google FinOps Hub

Objectives:

- Use techniques for automating resource management
- Respond programmatically to budget alerts Pub/Sub messages
- Utilize the Cloud Asset inventory service
- View recommendations in the Google FinOps Hub

Activities:

- Lab: Automate Tagging upon Resource Creation Using Asset API, Pub/Sub and Cloud Run Functions
- Lab: Programming Budget Alert Actions Using Pub/Sub and Cloud Run Functions

Module 10 - Building a FinOps Practice

Topics:

- FinOps Team
- Goals, Milestone, and Metrics
- Processes and Workflows
- Measuring Success
- Continuous Improvement

Objectives:

- Establish a FinOps team and roadmap
- Implement processes and workflows for FinOps
- Define success for a FinOps strategy
- Recognize the need for continuous improvement and evolution of FinOps

Activities:

- Lab: FinOps Challenge Lab, Foundations of FinOps on Google Cloud, Exploring and Understanding Billing Data, Resource Labeling and Tagging, Budgets and Alerting, BigQuery Cost Management and Optimization, Compute and GKE Cost Management and Optimization, Cloud Storage and Database Costs, Machine Learning and Vertex AI Cost Management, Automating Billing Activities, Building a FinOps Practice

Skills You Will Learn:

- Understand the core principles of FinOps and how it bridges the gap between the technology and finance in the cloud.
- Explore proven techniques to identify cost inefficiencies, optimize resource utilization, and achieve significant savings.
- Utilize advanced monitoring tools and data-driven insights to track spending patterns, forecast costs, and make informed decisions.
- Implement effective cost allocation models to accurately attribute cloud expenses to specific teams or projects.
- Leverage IaC to automate cost management processes, enforce spending policies, and ensure consistent financial governance.
- Use industry-leading FinOps platforms and tools to gain comprehensive visibility into your cloud spending and optimize resource usage.
- Apply your knowledge to real-world scenarios through hands-on exercises and case studies.
- Foster a culture of cost awareness and accountability within your organization.

Frequently Asked Questions

Q: What delivery options are available for Technical Foundations of FinOps on Google Cloud?

We offer multiple delivery formats:

- Live Instructor-Led Classroom Online (Virtual/Live Online)
- Traditional Instructor-Led Classroom Training (ILT)
- On-site delivery at your offices anywhere in United Kingdom
- Private dedicated courses customized for your team

Q: How many CPD hours does this course provide?

The 2-day Technical Foundations of FinOps on Google Cloud course provides up to 13.0 CPD hours of structured learning. CPD certificates can be provided upon request.

Q: What is the duration of the Technical Foundations of FinOps on Google Cloud training?

The training takes place over 2 day(s), with each day lasting approximately 16.00 hours including breaks for lunch and refreshments.

Q: Do you provide corporate training for Technical Foundations of FinOps on Google Cloud?

Yes, we provide corporate training, dedicated training, and closed classes for Technical Foundations of FinOps on Google Cloud. Training can take place anywhere in United Kingdom including London, Manchester, Birmingham, Edinburgh, or live online allowing teams from across United Kingdom or internationally to attend.

Q: What related terms do people search for?

Popular related searches include: Technical Foundations of FinOps on Google Cloud, Google Business and Management Tools, TFFGC, Google Cloud, vILT

Q: Why choose Nexus Human for Technical Foundations of FinOps on Google Cloud?

Nexus Human is recognized as one of the leading training providers. Our trainers have won multiple awards including:

- Small Firms Best Trainer Award
- National Training Partner of the Year (Ireland) - Multiple Years
- Global Top 30 Instructor Awards (2012, 2019, 2021)
- Tech Excellence Award Nominations
- Learning Performance Institute (LPI) External Training Provider Sponsor 2024

Q: Are there any discount codes available?

Yes! Use discount code **PENPAL5** when booking your Technical Foundations of FinOps on Google Cloud training. Please note that only one discount code can be used per booking and cannot be combined with other special offers.

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