



Global Knowledge®

GOOGLE CLOUD PLATFORM

FORMACIÓN Y CERTIFICACIÓN OFICIALES



Google Cloud Platform

The background of the entire page is a photograph of a modern office lounge. In the foreground, a man is sitting on a grey and red modular sofa, looking towards the right. Behind him, several other people are sitting at tables and on chairs, engaged in conversation. The room has large floor-to-ceiling windows that offer a view of a city with a prominent church spire. The interior is furnished with contemporary metal chairs, small round tables, and a long wooden table. The overall atmosphere is professional and collaborative.

En los últimos meses, **Google** se ha posicionado como uno de los fabricantes líderes en el mercado **Cloud con Google Cloud Platform**, habiendo desarrollado un portfolio completo de soluciones para las que la formación y certificación es clave.

En este catálogo podrás conocer en qué consiste **Google Cloud Platform**, sus soluciones y las formaciones y certificaciones oficiales que puedes obtener en **Global Knowledge**.

Google Cloud Platform

¿Cómo funciona la informática en la nube?



Infraestructura diseñada para el futuro

Segura, global, de alto rendimiento, rentable y en constante evolución. Nuestra nube está diseñada para funcionar a largo plazo.



Datos y análisis más que eficaces

Entra en el mundo del Big Data para encontrar respuestas con mayor rapidez y crear mejores productos.



Sin servidor, solo código

Pasa del prototipo a la producción y de ahí a una escala mundial sin preocuparte por la capacidad, la fiabilidad ni el rendimiento.



Confianza y seguridad

Google Cloud combina un modelo de seguridad, una infraestructura a escala mundial y una capacidad única para innovar con las que puedes mantener a tu empresa protegida y al día en el cumplimiento de las normativas pertinentes.

Las infraestructuras de Google Cloud Platform impulsan tu negocio y te ayudan a solucionar los problemas más peliagudos. Si utilizas Google Cloud, podrás aprovechar todas las ventajas de su infraestructura, herramientas e innovaciones tecnológicas para sacar el máximo provecho de tu negocio.

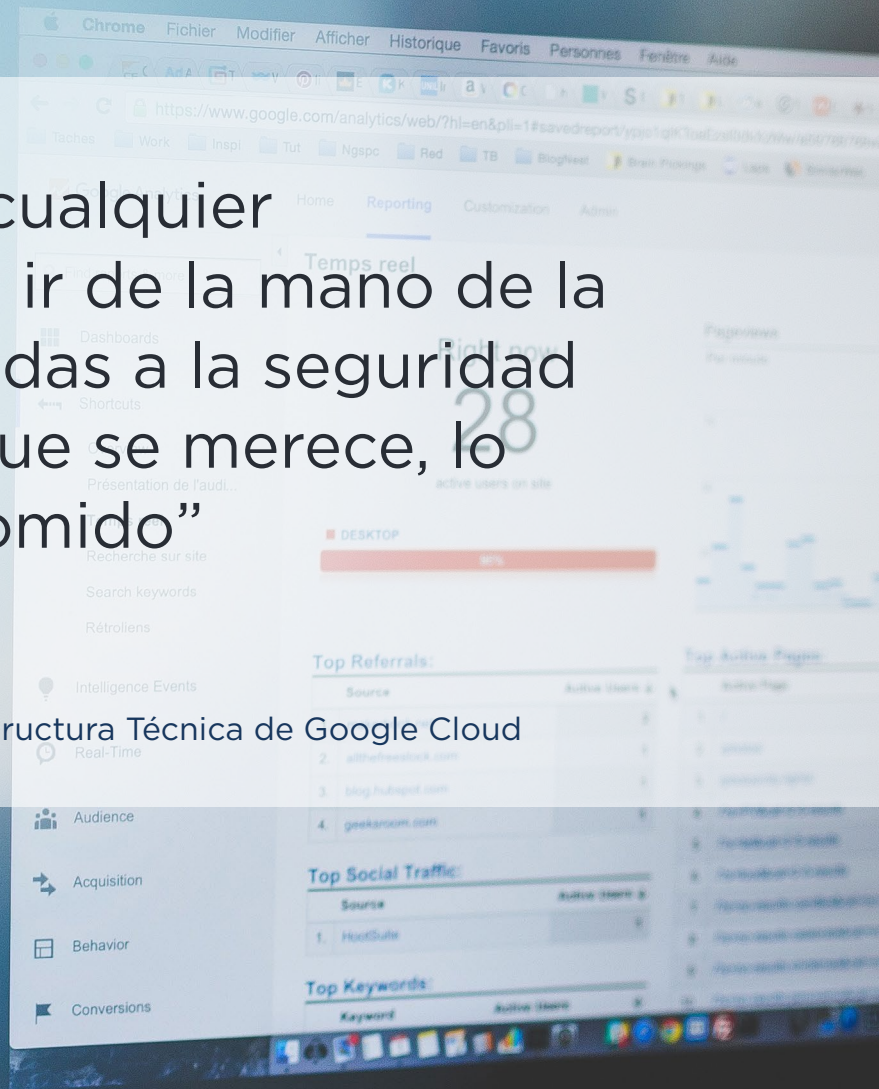
Consigue todos tus objetivos sin que la seguridad sea un problema

Contamos con una segura infraestructura multicapa, unos productos de seguridad innovadores y un firme compromiso con la transparencia. Si confías en nosotros, puedes estar tranquilo.

“Para nosotros, cualquier innovación debe ir de la mano de la seguridad. Si le das a la seguridad la importancia que se merece, lo demás es pan comido”

Urs Hölzle

Vicepresidente sénior de Infraestructura Técnica de Google Cloud



Cloud Computing con Google Cloud Platform

Todo lo que necesitas para crear y escalar aplicaciones. Escala tu infraestructura con una tecnología abierta y flexible.

Independientemente de cuál sea tu modelo de trabajo,

Google Cloud Platform es una buena solución para ti y tu negocio.

¿Prefieres una nube híbrida? ¿Una solución multinube? ¿Un modelo in situ?

Gracias a la infraestructura de Google, se adapta a tu situación y ubicación, y te ayuda a avanzar con tu negocio.

Herramientas **multinube** para que los procesos de ejecución y administración sean lo más uniformes posible.

Migración sencilla a **máquinas virtuales o contenedores** con precios flexibles, sin dependencias a largo plazo.

Tecnología de **software libre** incentivada por la comunidad

Arquitectura sin servidor

Tus desarrolladores, aún más productivos con el modelo sin servidores

Cuando los desarrolladores trabajan en plataformas totalmente administradas, pueden centrarse en lo más importante: diseñar unas aplicaciones fantásticas. Pasa del prototipo a una escala global sin preocuparte por la capacidad, la fiabilidad ni el rendimiento.



¿Qué es la arquitectura sin servidor?

La arquitectura sin servidor es un nuevo paradigma informático que abstrae por completo la complejidad que suele ir asociada con la administración de servidores para backends de **dispositivos móviles y de APIs, ETL**, tareas de tratamiento de datos, bases de datos y mucho más.



1

Sin aprovisionamiento por adelantado: solo tienes que proporcionarnos tu código y tus datos y Google se encarga de aprovisionar los recursos de forma dinámica, según la situación lo requiera.

2

Sin administración de servidores: olvídate de tener que gestionar y automatizar estas tareas de administración (como escalar el clúster o aplicar parches de seguridad del sistema operativo, entre otras); son repetitivas y suelen provocar errores.

3

Paga solo por lo que usas: como cuentas con un aprovisionamiento dinámico y un escalado automático, solo pagas por lo que utilizas.

Certificaciones Oficiales

Google Cloud Platform



Obtén una **certificación de Google Cloud** y muéstrale al mundo que puedes diseñar, desarrollar y administrar infraestructuras de aplicaciones y soluciones de datos con la tecnología de Google Cloud.

La designación “**Google Cloud Certified**” significa que demostraste que cuentas con las habilidades necesarias para aprovechar la tecnología de Google Cloud de una manera que te permite transformar empresas y tener un impacto muy positivo en las personas y los clientes que reciben sus servicios.

Ventajas que tiene una certificación en Google Cloud Platform

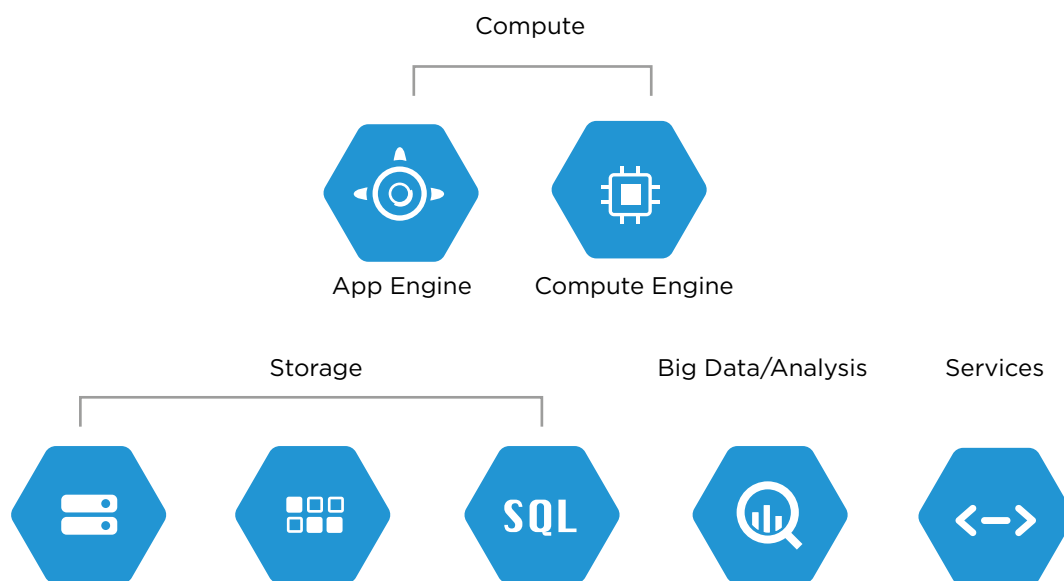
Obtén reconocimiento
en el sector

Valida tu conocimiento
técnico experto

Lleva tu desarrollo
profesional al siguiente nivel

En Global Knowledge puedes encontrar tres certificaciones oficiales de Global Knowledge.

Track de certificación de Google Cloud Platform





Google Cloud Certified

PROFESSIONAL CLOUD ARCHITECT

Un profesional certificado como **Professional Cloud Architect** puede ayudar a las organizaciones a aprovechar las tecnologías de Google Cloud.

Dado que esta persona comprende en detalle tanto la arquitectura de la nube como Google Cloud Platform, es capaz de diseñar, desarrollar y administrar soluciones de alta disponibilidad sólidas, seguras, escalables y dinámicas para lograr objetivos empresariales.

El examen Google Cloud Certified - Professional Cloud Architect evalúa tu capacidad para realizar lo siguiente:

- Diseñar y planificar una arquitectura de solución en la nube
- Administrar y aprovisionar la infraestructura de solución en la nube
- Diseñar teniendo en cuenta la seguridad y el cumplimiento de las normas aplicables
- Analizar y optimizar procesos técnicos y comerciales
- Administrar implementaciones de la arquitectura de nube
- Garantizar la confiabilidad de la solución y su funcionamiento

Examen
Cloud Architect

Cursos recomendados

- Google Cloud Fundamentals: Core Infrastructure
- Architecting with Google Cloud Platform: Infrastructure
- Architecting with Google Cloud Platform: Design and Process

Examen

Este examen mide objetivamente la capacidad de una persona de demostrar que posee las habilidades laborales fundamentales para desempeñar la función. A fin de obtener la certificación, deberás aprobar el examen de Professional Cloud Architect.

Su formato es de preguntas de opción múltiple con una o varias respuestas, y está disponible en inglés y japonés. Este examen no tiene requisitos previos y debe rendirse en persona en uno de nuestros centros de evaluación.

Duración: 2 horas
Recertification

Las certificaciones Google tienen una validez de 2 años. A partir de ahí, los candidatos deben recertificarse.



Google Cloud Certified

PROFESSIONAL DATA ENGINEER

Un **Professional Data Engineer** hace posible la toma de decisiones basada en datos gracias a la recopilación, transformación y visualización de datos.

El Ingeniero de datos se ocupa de las tareas de diseño, construcción, mantenimiento y solución de problemas de los sistemas de procesamiento de datos, con especial énfasis en la seguridad, la confiabilidad, la tolerancia a los errores, la escalabilidad, la fidelidad y la eficiencia de esos sistemas.

El Ingeniero de datos también debe analizar los datos para obtener información útil sobre los resultados del negocio, generar modelos estadísticos que respalden la toma de decisiones y crear modelos de aprendizaje automático que simplifiquen y automaticen procesos clave del negocio.

El examen de Professional Data Engineer de Google Cloud Certified evalúa tu capacidad para hacer lo siguiente:

- Crear y mantener estructuras de datos y bases de datos
- Diseñar sistemas de procesamiento de datos
- Analizar datos y facilitar el aprendizaje automático
- Modelar procesos empresariales para su análisis y optimización
- Diseñar teniendo en cuenta la fiabilidad
- Visualizar los datos y defender políticas
- Diseñar teniendo en cuenta la seguridad y el cumplimiento de las normas aplicables

Examen
Data Engineer

Cursos recomendados

- Google Cloud Fundamentals: Big Data and Machine Learning
- Data Engineering on Google Cloud Platform

Examen

Examen

Este examen mide objetivamente la capacidad de una persona de demostrar que posee las habilidades laborales fundamentales para desempeñar la función evaluada. Para obtener la certificación, deberás aprobar el examen de Professional Data Engineer. Su formato es de preguntas de opción múltiple con una o varias respuestas, y está disponible en inglés y japonés. Este examen no tiene requisitos previos y debe rendirse en persona en uno de nuestros centros de evaluación.

Duración: 2 horas

Recertificación

Las certificaciones Google tienen una validez de 2 años. A partir de ahí, los candidatos deben recertificarse.



Google Cloud Certified ASSOCIATE CLOUD ENGINEER

Un **Associate Cloud Engineer** se encarga de implementar aplicaciones, supervisar operaciones y administrar soluciones empresariales.

También sabe cómo usar Google Cloud Console y la interfaz de línea de comandos para realizar tareas comunes en la plataforma a fin de mantener una o más soluciones implementadas que aprovechen los servicios administrados por Google o autoadministrados que se encuentran en Google Cloud.

El examen de Associate Cloud Engineer evalúa tus habilidades en los siguientes ámbitos:

- Configuración de un entorno de soluciones en la nube
- Planificación y configuración de una solución en la nube
- Implementación de una solución en la nube
- Funcionamiento correcto de una solución en la nube
- Configuración del acceso y la seguridad

Recertificación

Este examen mide objetivamente la capacidad de una persona de demostrar que posee las habilidades laborales fundamentales para desempeñar la función. A fin de obtener la certificación, deberás aprobar el examen de **Associate Cloud Engineer**.

Su formato es de preguntas de opción múltiple con una o varias respuestas, y está disponible en inglés.

El examen no tiene requisitos previos y debe rendirse en persona en uno de nuestros centros de evaluación.

Duración: 2 horas



MODALIDADES DE ENTREGA

Cómo puedes cursar las formaciones de Google Cloud Platform

Los cursos de **Google Cloud Platform en Global Knowledge** pueden entregarse tanto en modalidad virtual como en presencial.

Cada curso puede adaptarse a las necesidades que tengáis y, en función del número de asistentes que tengáis planificado formar, se pueden crear sesiones personalizadas y cerradas, totalmente customizadas para vosotros.



Presenciales

- Formaciones entregadas por expertos en la materia
- Tendrás lo último en equipamiento y salas de formación
- Centro de formación disponibles en todo el mundo



Virtual & Class

- Puedes acceder a los videos formativos y actividades las 24 horas. Todos los días.
- Una formación que se adapta al horario
- Aprende a tu ritmo y a tu horario



Remota

- Aprovecha las formaciones con instructor con instructor desde cualquier parte del mundo
- Participa durante la sesión y colabora con otros asistentes como si estuvieras en clases
- Aprovecha la flexibilidad del soporte multiplataforma



Grupo privado

- Puedes formar a tu equipo, departamento u organización que escojas o en versión digital
- Adaptamos las formaciones y contenidos para cumplir nuestros objetivos
- Acceso privado con instrucciones expertos en la materia.

Desde dónde y cuándo realizarás las formaciones hasta cómo pagarás, encontrarás una selección de opciones flexibles y adecuadas para mantenerte a ti y a tu equipo bien formados.

Modalidades de entrega disponibles:



Modalidad blended

La opción más novedosa en Global Knowledge, por la que los asistentes pueden combinar presencial y virtual, obteniendo ventajas exclusivas de aprendizaje y flexibilidad formativa.

Contacta con nosotros para conocer qué cursos están actualmente en portfolio.



Classroom -formato presencial de calendario y cursos cerrados

Nuestros instructores y laboratorios prácticos proporcionan formación en el aula orientada a resultados. Los cursos se imparten por profesionales con experiencia y pueden otorgarte certificaciones externas para puestos de delegado.

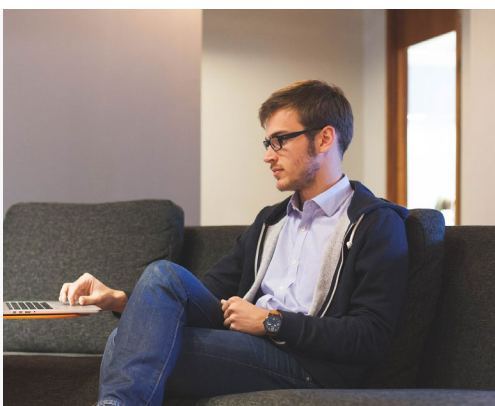
Si uno de nuestros cursos de calendario no se ajusta a tu agenda, podemos organizar un curso cerrado customizado en vuestras instalaciones. Consulta con nosotros qué opciones tenemos.



Virtual and Class (V&C)

Donde quieras, cuando quieras y casi todas las tecnologías que puedas necesitar. Orientado por nuestros expertos instructores, las clases en formato virtual de Global Knowledge son algo que no has visto antes.

En Global Knowledge puedes escoger entre un abanico de ofertas flexible de virtual class y organizar tu agenda formativa cuando quieras a través de nuestra V&C Select™ (Virtual learning & Classroom learning).



Cursos e-learning

GK Digital Learning facilita el acceso on-demand a contenido oficial, ejercicios de refuerzo y labs, así como conectar con expertos en la materia.

Junto con un entorno lleno de opciones, con acceso a contenido certificado por la industria IT y una variedad de recursos que garantizan tu éxito, puedes escoger entre un curso individual o un paquete de formaciones.

RUTA DE CERTIFICACIÓN DE GOOGLE CLOUD PLATFORM



Data and Machine Learning

Big Data and Machine Learning Fundamentals Data Engineering on GCP From Data to Insights with GCP



Application Development

Developing Applications with GCP



Cloud infraestructure

GCP Fundamentals. Core Infrastructure Architecting with GCP. Infrastructure Architecting with GCP. Design and Process

EL VALOR DE LA CERTIFICACIÓN DE GOOGLE CLOUD PLATFORM

¿Por qué certificarse en Google Cloud Platform?

Conviértete en un profesional o asociado certificado de Google y demuestra al mundo que puedes diseñar, desarrollar, gestionar y administrar infraestructuras de aplicaciones y soluciones de datos con Google Cloud.



En 2017 [Global Knowledge](https://www.globalknowledge.es) se convirtió en Cloud Premier (GCP) Training Partner y, desde entonces, ofrecemos de forma global el plan de estudios autorizado por Google Cloud.

Estos planes de formación incluyen Cloud Infrastructure, Data & Machine Learning y Desarrollo de Aplicaciones.

Los cursos ofrecidos por Global Knowledge combinan contenido teórico con múltiples laboratorios prácticos. Son una herramienta para aquellos que buscan cubrir sus gaps en conocimientos tecnológicos.

Ventajas de una certificación de Google Cloud

- Obtener el reconocimiento de la industria.
- Validar tu experiencia técnica.
- Dar un salto en tu carrera al siguiente nivel.



CURSOS OFICIALES GOOGLE CLOUD PLATFORM

Todos nuestros cursos es posible realizarlos tanto en inglés como en castellano, contacta con nosotros en consultoria@globalknowledge.es para formaciones customizadas.

Te detallamos los cursos oficiales de Google Cloud Platform que puedes realizar en Global Knowledge. Los contenidos y objetivos puedes encontrarlos en inglés, al igual que el material oficial.

GOOGLE CLOUD PLATFORM FUNDAMENTALS

Código del curso GO8324

Duración 1 día

This one-day instructor-led class provides an overview of Google Cloud Platform products and services. Through a combination of presentations, demos, and hands-on labs, participants learn the value of Google Cloud Platform and how to incorporate cloud-based solutions into business strategies.

Target:

- Individuals planning to deploy applications and create application environments on Google Cloud Platform.
- Developers, systems operations professionals, and solution architects getting started with Google Cloud Platform.
- Executives and business decision makers evaluating the potential of Google Cloud Platform to address their business needs.

Course objectives:

- Identify the purpose and value of Google Cloud Platform products and services.
- Interact with Google Cloud Platform services.
- Describe ways in which customers have used Google Cloud Platform.
- Choose among and use application deployment environments on Google Cloud Platform: Google App Engine, Google Kubernetes Engine, and Google Compute Engine.
- Choose among and use Google Cloud Platform storage options: Google Cloud Storage, Google Cloud SQL, Google Cloud Bigtable, and Google Cloud Datastore.
- Make basic use of BigQuery, Google's managed data warehouse for analytics.
- Make basic use of Cloud Deployment Manager, Google's tool for creating and managing cloud resources through templates.
- Make basic use of Google Stackdriver, Google's monitoring, logging, and diagnostics system.

Course content:

Module 1: Introducing Google Cloud Platform

- ✓ Explain the advantages of Google Cloud Platform.
- ✓ Define the components of Google's network infrastructure, including: Points of presence, data centers, regions, and zones.
- ✓ Understand the difference between Infrastructure-as-a-Service (IaaS) and Platform-as-a-Service (PaaS).

Module 2: Getting Started with Google Cloud Platform

- ✓ Identify the purpose of projects on Google Cloud Platform.
- ✓ Understand the purpose of and use cases for Identity and Access Management.

- ✓ List the methods of interacting with Google Cloud Platform.
- ✓ Lab: Getting Started with Google Cloud Platform.

Module 3: Virtual Machines and Networks in the Cloud

- ✓ Identify the purpose of and use cases for Google Compute Engine.
- ✓ Understand the various Google Cloud Platform networking and operational tools and services.
- ✓ Lab: Compute Engine

Module 4: Storage in the Cloud

- ✓ Understand the purpose of and use cases for: Google Cloud Storage, Google Cloud SQL, Google Cloud Bigtable, and Google Cloud Datastore.
- ✓ Learn how to choose between the various storage options on Google Cloud Platform.
- ✓ Lab: Cloud Storage and Cloud SQL

Module 5: Containers in the Cloud

- ✓ Define the concept of a container and identify uses for containers.
- ✓ Identify the purpose of and use cases for Google Kubernetes Engine and Kubernetes.
- ✓ Lab: Kubernetes Engine

Module 6: Applications in the Cloud

- ✓ Understand the purpose of and use cases for Google App Engine.
- ✓ Contrast the App Engine Standard environment with the App Engine Flexible environment.
- ✓ Understand the purpose of and use cases for Google Cloud Endpoints.
- ✓ Lab: App Engine

Module 7: Developing, Deploying, and Monitoring in the Cloud

- ✓ Understand options for software developers to host their source code.
- ✓ Understand the purpose of template-based creation and management of resources.
- ✓ Understand the purpose of integrated monitoring, alerting, and debugging.
- ✓ Lab: Deployment Manager and Stackdriver

Module 8: Big Data and Machine Learning in the Cloud

- ✓ Understand the purpose of and use cases for the products and services in the Google Cloud big data and machine learning platforms.
- ✓ Lab: BigQuery

ARCHITECTING WITH GOOGLE CLOUD PLATFORM: DESIGN AND PROCESS

Código del curso GO5974

Duración 2 días

This two-day instructor-led class equips students to build highly reliable and efficient solutions on Google Cloud Platform, using proven design patterns and the principles of Google Site Reliability Engineering (SRE). It is a continuation of the Architecting with Google Cloud Platform: Infrastructure course and assumes hands-on experience with the technologies covered in that course.

Through a combination of presentations, demos, and hands-on labs, participants learn to design GCP deployments that are highly reliable and secure; and how to operate GCP deployments in a highly available and cost-effective manner.

Target:

- Cloud Solutions Architects, Site Reliability Engineers, Systems Operations professionals, DevOps Engineers, IT managers.
- Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud Platform.

Course objectives:

This course teaches participants the following skills:

- Design for high availability, scalability, and maintainability.
- Assess tradeoffs and make sound choices among Google Cloud Platform products.
- Integrate on-premises and cloud resources.
- Identify ways to optimize resources and minimize cost.
- Implement processes that minimize downtime, such as monitoring and alarming, unit and integration testing, production resilience testing, and incident post-mortem analysis.
- Implement policies that minimize security risks, such as auditing, separation of duties and least privilege.
- Implement technologies and processes that assure business continuity in the event of a disaster.

Course content:

Module 1: Defining the Service

- ✓ Design in this class.
- ✓ State and solution.
- ✓ Measurement.
- ✓ Gathering requirements, SLOs, SLAs, and SLIs (key performance indicators).

Module 2: Business-logic layer design

- ✓ Microservices architecture.
- ✓ GCP 12-factor support.

- ✓ Mapping compute needs to Google Cloud Platform processing services.
- ✓ Compute system provisioning.

Module 3: Data layer design

- ✓ Classifying and characterizing data.
- ✓ Data ingest and data migration.
- ✓ Identification of storage needs and mapping to Google Cloud Platform storage systems.

Module 4: Presentation layer design

- ✓ Network edge configuration.
- ✓ Network configuration for data transfer within the service, including load balancing and network location.
- ✓ Network integration with other environments, including on premise and multi-cloud.
- ✓ Module 5: Design for resiliency, scalability, and disaster recovery
- ✓ Failure due to loss of resources.
- ✓ Failure due to overload.
- ✓ Strategies for coping with failure.
- ✓ Business continuity and disaster recovery, including restore strategy and data lifecycle management.
- ✓ Scalable and resilient design.

Module 6: Design for security

- ✓ Google Cloud Platform security.
- ✓ Network access control and firewalls.
- ✓ Protections against denial of service.
- ✓ Resource sharing and isolation.
- ✓ Data encryption and key management.
- ✓ Identity access and auditing.

Module 7: Capacity planning and cost optimization

- ✓ Capacity planning. Pricing.

Module 8: Deployment, monitoring and alerting, and incident response

- ✓ Deployment., Monitoring and alerting., Incident response.

Prerequisites:

To get the most out of this course, participants should have: Completed Architecting with Google Cloud Platform: Infrastructure or have equivalent experience Basic proficiency with command-line tools and Linux operating system environments Systems Operations experience including deploying and managing applications, either on-premises or in a public cloud environment

ARCHITECTING WITH GOOGLE CLOUD PLATFORM: INFRASTRUCTURE

Código del curso GO5973

Duración 3 días

This three-day instructor-led class introduces participants to the comprehensive and flexible infrastructure and platform services provided by Google Cloud Platform. Through a combination of presentations, demos, and hands-on labs, participants explore and deploy solution elements, including infrastructure components such as networks, systems and applications services. This course also covers deploying practical solutions including securely interconnecting networks, customer-supplied encryption keys, security and access management, quotas and billing, and resource monitoring.

Target:

- Cloud Solutions Architects, DevOps Engineers.
- Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud Platform.

Course objectives:

- Consider the entire range of Google Cloud Platform technologies in their plans.
- Learn methods to develop, implement, and deploy solutions.
- Distinguish between features of similar or related products and technologies.
- Recognize a wide variety of solution domains, use cases, and applications.
- Develop essential skills for managing and administering solutions.
- Develop knowledge of solution patterns -- methods, technologies, and designs that are used to implement security, scalability, high availability, and other desired qualities.

Course content:

Essential Cloud Infrastructure:

- ✓ Foundation

Module 1: Introduction to Google Cloud Platform

- ✓ Google Cloud Platform (GCP) Infrastructure
- ✓ Using GCP
- ✓ Lab: Console and Cloud Shell
- ✓ Demo: Projects
- ✓ Lab: Infrastructure Preview
- ✓ Module 2: 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

Module 3: 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

Module 4: Cloud IAM

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

Module 5: Data Storage Services

- ✓ Cloud Storage
- ✓ Lab: Cloud Storage
- ✓ Cloud SQL
- ✓ Lab: Cloud SQL
- ✓ Cloud Spanner, Cloud Datastore
- ✓ Lab: Cloud Datastore
- ✓ Cloud Bigtable

Module 6: Resource Management

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

Module 7: 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

Module 8: Interconnecting Networks

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

Module 9: 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

Module 10: Autoscaling

- ✓ Autoscaling, Policies, Configuration
- ✓ Lab: Autoscaling

Module 11: Infrastructure Automation with Google Cloud Platform APIs

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

Module 12: Infrastructure Automation with Deployment Manager

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

Module 13: Managed Services

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

Module 14: Application Infrastructure Services

- ✓ Cloud Pub/Sub, API Management, Cloud Functions, Cloud Source Repositories, Specialty APIs
- ✓ Module 15: Application Development Services
- ✓ App Engine

Module 16: Containers

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

BIG DATA AND MACHINE LEARNING FUNDAMENTALS

Código del curso GO8325

Duración 1 día

This one-day instructor-led course introduces participants to the big data capabilities of Google Cloud Platform. Through a combination of presentations, demos, and hands-on labs, participants get an overview of the Google Cloud platform and a detailed view of the data processing and machine learning capabilities. This course showcases the ease, flexibility, and power of big data solutions on Google Cloud Platform.

Target:

- Data analysts, Data scientists, Business analysts getting started with Google Cloud Platform.
- Individuals responsible for designing pipelines and architectures for data processing, creating and maintaining machine learning and statistical models, querying datasets, visualizing query results and creating reports.
- Executives and IT decision makers evaluating Google Cloud Platform for use by data scientists.

Course objectives:

- Identify the purpose and value of the key Big Data and Machine Learning products in the Google Cloud Platform.
- Use Cloud SQL and Cloud Dataproc to migrate existing MySQL and Hadoop/Pig/Spark/Hive workloads to Google Cloud Platform.
- Employ BigQuery and Cloud Datalab to carry out interactive data analysis.
- Train and use a neural network using TensorFlow.
- Employ ML APIs.
- Choose between different data processing products on the Google Cloud Platform.

Course content:

Module 1: Introducing Google Cloud Platform

- ✓ Google Platform Fundamentals Overview.
- ✓ Google Cloud Platform Big Data Products.

Module 2: Compute and Storage Fundamentals

- ✓ CPUs on demand (Compute Engine).
- ✓ A global filesystem (Cloud Storage).
- ✓ CloudShell.
- ✓ Lab: Set up a Ingest-Transform-Publish data processing pipeline.

Module 3: Data Analytics on the Cloud

- ✓ Stepping-stones to the cloud.
- ✓ Cloud SQL: your SQL database on the cloud.

- ✓ Lab: Importing data into CloudSQL and running queries.
- ✓ Spark on Dataproc.
- ✓ Lab: Machine Learning Recommendations with Spark on Dataproc.

Module 4: Scaling Data Analysis

- ✓ Fast random access.
- ✓ Datalab.
- ✓ BigQuery.
- ✓ Lab: Build machine learning dataset.

Module 5: Machine Learning

- ✓ Machine Learning with TensorFlow.
- ✓ Lab: Carry out ML with TensorFlow
- ✓ Pre-built models for common needs.
- ✓ Lab: Employ ML APIs.

Module 6: Data Processing Architectures

- ✓ Message-oriented architectures with Pub/Sub.
- ✓ Creating pipelines with Dataflow.
- ✓ Reference architecture for real-time and batch data processing.

Module 7: Summary

- ✓ Why GCP?
- ✓ Where to go from here
- ✓ Additional Resources

Course Pre-requisites:

- ✓ Basic proficiency with common query language such as SQL.
- ✓ Experience with data modeling, extract, transform, load activities.
- ✓ Developing applications using a common programming language such Python.
- ✓ Familiarity with machine learning and/or statistics.

BUILD A BUSINESS TRANSFORMATION VISION WITH GOOGLE CLOUD

Código del curso GO6699

Duración 1 día

If you're wondering what the cloud hype is about or want to know what it can do for your enterprise—without the technical jargon—this course is for you.

In this private class, learn how the Google Cloud library can address business challenges through three distinct lenses: technology, economics, and security. Technology alone won't help your business become innovative, so a fourth lens helps you reimagine the way you work by encouraging a culture of innovation. While working in groups, you'll develop a vision starting with an ambitious business challenge and then define a potential solution and its impact. This vision will take into account several cloud adoption phases so that you can mobilize your teams to work in parallel toward business acceleration while reducing costs.

Target:

- Traditional enterprise business decision makers
- Suitable for all management levels leading Product, Operations, Finance, People Management, Sales, Marketing, and Client Management interested in how Google Cloud Platform can support their business transformation.

Course objectives:

- Differentiate cloud services from traditional on-premises technology through financial and IT lenses.
- Describe the top ways Google Cloud Platform (GCP) innovatively reduces costs and creates value using examples.
- Describe Google's multi-layer measures to help ensure customer data is secure, private, and compliant per government or industry regulations.
- Describe the requirements to successfully lead a culture of innovation.
- Build a cloud-first business transformation vision using a machine learning use case.

Course content:

Module 1: Then and Now

Objective: Differentiate cloud services from traditional on-premises technology through financial and IT lenses.

- ✓ Before cloud: what did the business IT backbone look like?
- ✓ How has IT evolved per the demands of growing businesses?
- ✓ What is cloud? What is Google Cloud Platform (GCP)?
- ✓ What are today's specific business and tech-related needs?
- ✓ How does the Google Cloud services meet these needs?

Module 2: Creating Business Value

Objective: Describe the top ways Google Cloud Platform (GCP) can innovatively reduce costs and create value.

- ✓ What are the GCP product categories and what business needs do they address?
- ✓ How can GCP enable effective data management?
- ✓ How can GCP innovatively reduce costs and create value?
- ✓ What are some business transformation cases that use GCP?

Module 3: Secure and Compliant

Objective: Describe Google's multi-layer measures to help ensure customer data is secure, private, and compliant per government or industry regulations.

- ✓ What are today's cybersecurity challenges?
- ✓ What is Google's multi-layer approach to security?
- ✓ How can a shared security model help to ensure joint business success?

Module 4: Culture of Innovation

Objective: Describe the requirements to successfully lead a culture of innovation.

- ✓ How can using GCP change the way a business works?
- ✓ How can business decision makers encourage a culture of innovation using specific examples?
- ✓ What are some ways to practice innovative thinking techniques?
- ✓ What are core organization-wide innovation principles?
- ✓ What are some ways to reinforce innovation across an organization?
- ✓ Workshop: Transformation Vision

Objective: Build a cloud-first business transformation vision using a machine learning use case.

Rounds:

- ✓ Identify an ambitious business challenge
- ✓ Brainstorm potential solutions
- ✓ Select the primary solution and determine the required data sets
- ✓ Categorize high-level steps for implementing the solution

Course pre-requisites:

- ✓ Google or gmail account to access course materials
- ✓ Savvy about own business products/services and industry
- ✓ Some knowledge of capital expenditure
- ✓ No prior technical knowledge is required
- ✓ Class size requirement: 16-24 attendees
- ✓ If course instruction takes place on customer's site, a point of contact is required to ensure all tech requirements are met

DATA ENGINEERING ON GOOGLE CLOUD PLATFORM

Código del curso GO5975

Duración 4 días

This four-day instructor-led class provides participants a hands-on introduction to designing and building data processing systems on Google Cloud Platform. Through a combination of presentations, demos, and hand-on labs, participants will learn how to design data processing systems, build end-to-end data pipelines, analyze data and carry out machine learning. The course covers structured, unstructured, and streaming data.

Target:

This class is intended for experienced developers who are responsible for managing big data transformations including:

- Extracting, Loading, Transforming, cleaning, and validating data
- Designing pipelines and architectures for data processing
- Creating and maintaining machine learning and statistical models
- Querying datasets, visualizing query results and creating reports

Course objectives:

- Design and build data processing systems on Google Cloud Platform
- Process batch and streaming data by implementing autoscaling data pipelines on Cloud Dataflow
- Derive business insights from extremely large datasets using Google BigQuery
- Train, evaluate and predict using machine learning models using Tensorflow and Cloud ML
- Leverage unstructured data using Spark and ML APIs on Cloud Dataproc
- Enable instant insights from streaming data

Course content:

Leveraging Unstructured Data with Cloud Dataproc on Google Cloud Platform

Module 1: Google Cloud Dataproc Overview

- ✓ Creating and managing clusters.
- ✓ Leveraging custom machine types and preemptible worker nodes.
- ✓ Scaling and deleting Clusters.
- ✓ Lab: Creating Hadoop Clusters with Google Cloud Dataproc.

Module 2: Running Dataproc Jobs

- ✓ Running Pig and Hive jobs.
- ✓ Separation of storage and compute.
- ✓ Lab: Running Hadoop and Spark Jobs with Dataproc.

- ✓ Lab: Submit and monitor jobs.

Module 3: Integrating Dataproc with Google Cloud Platform

- ✓ Customize cluster with initialization actions.
- ✓ BigQuery Support.
- ✓ Lab: Leveraging Google Cloud Platform Services.

Module 4: Making Sense of Unstructured Data with Google's Machine Learning APIs

- ✓ Google's Machine Learning APIs.
- ✓ Common ML Use Cases.
- ✓ Invoking ML APIs.
- ✓ Lab: Adding Machine Learning Capabilities to Big Data Analysis.
- ✓ Serverless Data Analysis with Google BigQuery and Cloud Dataflow

Module 5: Serverless data analysis with BigQuery

- ✓ What is BigQuery.
- ✓ Queries and Functions.
- ✓ Lab: Writing queries in BigQuery.
- ✓ Loading data into BigQuery.
- ✓ Exporting data from BigQuery.
- ✓ Lab: Loading and exporting data.
- ✓ Nested and repeated fields.
- ✓ Querying multiple tables.
- ✓ Lab: Complex queries.
- ✓ Performance and pricing.

Module 6: Serverless, autoscaling data pipelines with Dataflow

- ✓ The Beam programming model.
- ✓ Data pipelines in Beam Python.
- ✓ Data pipelines in Beam Java.
- ✓ Lab: Writing a Dataflow pipeline.
- ✓ Scalable Big Data processing using Beam.
- ✓ Lab: MapReduce in Dataflow.
- ✓ Incorporating additional data.
- ✓ Lab: Side inputs.
- ✓ Handling stream data.
- ✓ GCP Reference architecture.
- ✓ Serverless Machine Learning with TensorFlow on Google Cloud Platform

Module 7: Getting started with Machine Learning

- ✓ What is machine learning (ML).

- ✓ Effective ML: concepts, types.
- ✓ ML datasets: generalization.
- ✓ Lab: Explore and create ML datasets.

Module 8: Building ML models with Tensorflow

- ✓ Getting started with TensorFlow.
- ✓ Lab: Using tf.learn.
- ✓ TensorFlow graphs and loops + lab.
- ✓ Lab: Using low-level TensorFlow + early stopping.
- ✓ Monitoring ML training.
- ✓ Lab: Charts and graphs of TensorFlow training.

Module 9: Scaling ML models with CloudML

- ✓ Why Cloud ML?
- ✓ Packaging up a TensorFlow model.
- ✓ End-to-end training.
- ✓ Lab: Run a ML model locally and on cloud.

Module 10: Feature Engineering

- ✓ Creating good features.
- ✓ Transforming inputs.
- ✓ Synthetic features.
- ✓ Preprocessing with Cloud ML.
- ✓ Lab: Feature engineering.
- ✓ Building Resilient Streaming Systems on Google Cloud Platform

Module 11: Architecture of streaming analytics pipelines

- ✓ Stream data processing: Challenges.
- ✓ Handling variable data volumes.
- ✓ Dealing with unordered/late data.
- ✓ Lab: Designing streaming pipeline.

Module 12: Ingesting Variable Volumes

- ✓ What is Cloud Pub/Sub?
- ✓ How it works: Topics and Subscriptions.
- ✓ Lab: Simulator.

Module 13: Implementing streaming pipelines

- ✓ Challenges in stream processing.
- ✓ Handle late data: watermarks, triggers, accumulation.
- ✓ Lab: Stream data processing pipeline for live traffic data.

Module 14: Streaming analytics and dashboards

- ✓ Streaming analytics: from data to decisions.
- ✓ Querying streaming data with BigQuery.
- ✓ What is Google Data Studio?
- ✓ Lab: build a real-time dashboard to visualize processed data.

Module 15: High throughput and low-latency with Bigtable

- ✓ What is Cloud Spanner?
- ✓ Designing Bigtable schema.
- ✓ Ingesting into Bigtable.
- ✓ Lab: streaming into Bigtable.

DEVELOPING APPLICATIONS WITH GOOGLE CLOUD PLATFORM

Código del curso GO6593

Duración 3 días

In this course, application developers learn how to design, develop, and deploy applications that seamlessly integrate components from the Google Cloud ecosystem. Through a combination of presentations, demos, and hands-on labs, participants learn how to use GCP services and pre-trained machine learning APIs to build secure, scalable, and intelligent cloud-native applications.

Target:

Application developers who want to build cloud-native applications or redesign existing applications that will run on Google Cloud Platform

Course objectives:

- Use best practices for application development.
- Choose the appropriate data storage option for application data.
- Implement federated identity management.
- Develop loosely coupled application components or microservices.
- Integrate application components and data sources.
- Debug, trace, and monitor applications.
- Perform repeatable deployments with containers and deployment services.
- Choose the appropriate application runtime environment; use Google Kubernetes Engine as a run-time environment and later switch to a no-ops solution with Google App Engine Flex.

Course content:

The course includes presentations, demonstrations, and hands-on labs.

Module 1: Best Practices for Application Development

- ✓ Code and environment management
- ✓ Design and development of secure, scalable, reliable, loosely coupled application components and microservices
- ✓ Continuous integration and delivery
- ✓ Re-architecting applications for the cloud

Module 2: Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK

- ✓ How to set up and use Google Cloud Client Libraries, Google Cloud SDK, and Google Firebase SDK

Lab: Set up Google Client Libraries, Google Cloud SDK, and Firebase SDK on a Linux instance and set up application credentials

Module 3: Overview of Data Storage Options

- ✓ Overview of options to store application data
- ✓ Use cases for Google Cloud Storage, Google Cloud Datastore, Cloud Bigtable, Google Cloud SQL, and Cloud Spanner

Module 4: Best Practices for Using Google Cloud Datastore

- ✓ Best practices related to the following:
- ✓ Queries
- ✓ Built-in and composite indexes
- ✓ Inserting and deleting data (batch operations)
- ✓ Transactions
- ✓ Error handling
- ✓ Bulk-loading data into Cloud Datastore by using Google Cloud Dataflow
- ✓ Lab: Store application data in Cloud Datastore

Module 5: Performing Operations on Buckets and Objects

- ✓ Operations that can be performed on buckets and objects
- ✓ Consistency model
- ✓ Error handling

Module 6: Best Practices for Using Google Cloud Storage

- ✓ Naming buckets for static websites and other uses
- ✓ Naming objects (from an access distribution perspective)
- ✓ Performance considerations
- ✓ Setting up and debugging a CORS configuration on a bucket
- ✓ Lab: Store files in Cloud Storage

Module 7: Handling Authentication and Authorization

- ✓ Cloud Identity and Access Management (IAM) roles and service accounts
- ✓ User authentication by using Firebase Authentication
- ✓ User authentication and authorization by using Cloud Identity-Aware Proxy
- ✓ Lab: Authenticate users by using Firebase Authentication

Module 8: Using Google Cloud Pub/Sub to Integrate Components of Your Application

- ✓ Topics, publishers, and subscribers
- ✓ Pull and push subscriptions
- ✓ Use cases for Cloud Pub/Sub
- ✓ Lab: Develop a backend service to process messages in a message queue

Module 9: Adding Intelligence to Your Application

- ✓ Overview of pre-trained machine learning APIs such as Cloud Vision API and Cloud Natural Language Processing API

Module 10: Using Google Cloud Functions for Event-Driven Processing

- ✓ Key concepts such as triggers, background functions, HTTP functions
- ✓ Use cases
- ✓ Developing and deploying functions
- ✓ Logging, error reporting, and monitoring

Module 11: Managing APIs with Google Cloud Endpoints

- ✓ Open API deployment configuration
- ✓ Lab: Deploy an API for your application
- ✓ Module 12: Deploying an Application by Using Google Cloud Container Builder, Google Cloud Container Registry, and Google Cloud Deployment Manager
- ✓ Creating and storing container images
- ✓ Repeatable deployments with deployment configuration and templates
- ✓ Lab: Use Deployment Manager to deploy a web application into Google App Engine flexible environment test and production environments

Module 13: Execution Environments for Your Application

- ✓ Considerations for choosing an execution environment for your application or service:
- ✓ Google Compute Engine
- ✓ Kubernetes Engine
- ✓ App Engine flexible environment
- ✓ Cloud Functions
- ✓ Cloud Dataflow
- ✓ Lab: Deploying your application on App Engine flexible environment

Module 14: Debugging, Monitoring, and Tuning Performance by Using Google Stackdriver

- ✓ Stackdriver Debugger
- ✓ Stackdriver Error Reporting
- ✓ Lab: Debugging an application error by using Stackdriver Debugger and Error Reporting
- ✓ Stackdriver Logging
- ✓ Key concepts related to Stackdriver Trace and Stackdriver Monitoring. Lab: Use Stackdriver Monitoring and Stackdriver Trace to trace a request across services, observe, and optimize performance

FROM DATA TO INSIGHTS WITH GOOGLE CLOUD

Código del curso GO6589

Duración 2 días

Want to know how to query and process petabytes of data in seconds? Curious about data analysis that scales automatically as your data grows? Welcome to the Data Insights course!

This two-day instructor-led class teaches course participants how to derive insights through data analysis and visualization using the Google Cloud Platform. The course features interactive scenarios and hands-on labs where participants explore, mine, load, visualize, and extract insights from diverse Google BigQuery datasets. The course covers data loading, querying, schema modeling, optimizing performance, query pricing, and data visualization.

Target:

- Data Analysts, Business Analysts, Business Intelligence professionals
- Cloud Data Engineers who will be partnering with Data Analysts to build scalable data solutions on Google Cloud Platform

Course objectives:

- Derive insights from data using the analysis and visualization tools on Google Cloud Platform
- Interactively query datasets using Google BigQuery
- Load, clean, and transform data at scale
- Visualize data using Google Data Studio and other third-party platforms
- Distinguish between exploratory and explanatory analytics and when to use each approach
- Explore new datasets and uncover hidden insights quickly and effectively
- Optimizing data models and queries for price and performance

Couse content:

The course includes presentations, demonstrations, and hands-on labs.

Module 1: Introduction to Data on the Google Cloud Platform

Before and Now: Scalable Data Analysis in the Cloud

- ✓ Highlight Analytics Challenges Faced by Data Analysts
- ✓ Compare Big Data On-Premises vs on the Cloud
- ✓ Learn from Real-World Use Cases of Companies Transformed through Analytics on the Cloud
- ✓ Navigate Google Cloud Platform Project Basics
- ✓ Lab: Getting started with Google Cloud Platform

Module 2: Big Data Tools Overview

Sharpen the Tools in your Data Analyst toolkit

- ✓ Walkthrough Data Analyst Tasks, Challenges, and Introduce Google Cloud Platform Data Tools
- ✓ Demo: Analyze 10 Billion Records with Google BigQuery
- ✓ Explore 9 Fundamental Google BigQuery Features
- ✓ Compare GCP Tools for Analysts, Data Scientists, and Data Engineers
- ✓ Lab: Exploring Datasets with Google BigQuery

Module 3: Exploring your Data with SQL

Get Familiar with Google BigQuery and Learn SQL Best Practices

- ✓ Compare Common Data Exploration Techniques
- ✓ Learn How to Code High Quality Standard SQL
- ✓ Explore Google BigQuery Public Datasets
- ✓ Visualization Preview: Google Data Studio
- ✓ Lab: Troubleshoot Common SQL Errors

Module 4: Google BigQuery Pricing

Calculate Google BigQuery Storage and Query Costs

- ✓ Walkthrough of a BigQuery Job
- ✓ Calculate BigQuery Pricing: Storage, Querying, and Streaming Costs
- ✓ Optimize Queries for Cost
- ✓ Lab: Calculate Google BigQuery Pricing

Module 5: Cleaning and Transforming your Data

Wrangle your Raw Data into a Cleaner and Richer Dataset

- ✓ Examine the 5 Principles of Dataset Integrity
- ✓ Characterize Dataset Shape and Skew
- ✓ Clean and Transform Data using SQL
- ✓ Clean and Transform Data using a new UI: Introducing Cloud Dataprep
- ✓ Lab: Explore and Shape Data with Cloud Dataprep

Module 6: Storing and Exporting Data. Create new Tables and Exporting Results

Compare Permanent vs Temporary Tables

- ✓ Save and Export Query Results
- ✓ Performance Preview: Query Cache
- ✓ Lab: Creating new Permanent Tables

Module 7: Ingesting New Datasets into Google BigQuery. Bring your Data into the Cloud

- ✓ Query from External Data Sources
- ✓ Avoid Data Ingesting Pitfalls
- ✓ Ingest New Data into Permanent Tables
- ✓ Discuss Streaming Inserts

- ✓ Lab: Ingesting and Querying New Datasets

Module 8: Data Visualization

Effectively Explore and Explain your Data through Visualization

- ✓ Overview of Data Visualization Principles
- ✓ Exploratory vs Explanatory Analysis Approaches
- ✓ Demo: Google Data Studio UI
- ✓ Connect Google Data Studio to Google BigQuery
- ✓ Lab: Exploring a Dataset in Google Data Studio

Module 9: Joining and Merging Datasets

Combine and Enrich your Datasets with more Data

- ✓ Merge Historical Data Tables with UNION
- ✓ Introduce Table Wildcards for Easy Merges
- ✓ Review Data Schemas: Linking Data Across Multiple Tables
- ✓ Walkthrough JOIN Examples and Pitfalls
- ✓ Lab: Join and Union Data from Multiple Tables

Module 10: Advanced Functions and Clauses

Dive Deeper into Advanced Query Writing with Google BigQuery

- ✓ Review SQL Case Statements
- ✓ Introduce Analytical Window Functions
- ✓ Safeguard Data with One-Way Field Encryption
- ✓ Discuss Effective Sub-query and CTE design
- ✓ Compare SQL and Javascript UDFs
- ✓ Lab: Deriving Insights with Advanced SQL Functions

Module 11: Schema Design and Nested Data Structures

Model your Datasets for Scale in Google BigQuery

- ✓ Compare Google BigQuery vs Traditional RDBMS Data Architecture
- ✓ Normalization vs Denormalization: Performance Tradeoffs
- ✓ Schema Review: The Good, The Bad, and The Ugly
- ✓ Arrays and Nested Data in Google BigQuery
- ✓ Lab: Querying Nested and Repeated Data

Module 12: More Visualization with Google Data Studio

Create Pixel-Perfect Dashboards

- ✓ Create Case Statements and Calculated Fields
- ✓ Avoid Performance Pitfalls with Cache considerations
- ✓ Share Dashboards and Discuss Data Access considerations

Module 13: Optimizing for Performance

Troubleshoot and Solve Query Performance Problems

- ✓ Avoid Google BigQuery Performance Pitfalls
- ✓ Prevent Hotspots in your Data
- ✓ Diagnose Performance Issues with the Query Explanation map
- ✓ Lab: Optimizing and Troubleshooting Query Performance

Module 14: Advanced Insights

Think, Analyze, and Share Insights like a Data Scientist

- ✓ Introducing Cloud Datalab
- ✓ Cloud Datalab Notebooks and Cells
- ✓ Benefits of Cloud Datalab

Module 15: Data Access

Keep Data Security top-of-mind in the Cloud

- ✓ Compare IAM and BigQuery Dataset Roles
- ✓ Avoid Access Pitfalls
- ✓ Review Members, Roles, Organizations, Account Administration, and Service Account

Course pre-requisites:

Basic proficiency with ANSI SQL

Recommended training:

Gain a wider view of Google Cloud Platform using Big Data and ML Fundamentals (GO8325)

GETTING STARTED WITH GOOGLE KUBERNETES ENGINE

Código del curso GO6591

Duración 1 día

This five-hour class equips you to containerize workloads in Docker containers, deploy them to Kubernetes clusters provided by Google Kubernetes Engine, and scale those workloads to handle increased traffic. Students also learn how to continuously deploy new code in a Kubernetes cluster to provide application updates.

Learn to containerize workloads in Docker containers, deploy them to Kubernetes clusters provided by Google Kubernetes Engine, and scale those workloads to handle increased traffic. You also learn how to continuously deploy new code in a Kubernetes cluster to provide application updates.

Target:

- Application developers, Cloud Solutions Architects, DevOps Engineers, IT managers.
- Individuals using Google Cloud Platform to create new solutions or to integrate existing systems, application environments, and infrastructure with the Google Cloud Platform.

Course objectives:

- Understand container basics.
- Containerize an existing application.
- Understand Kubernetes concepts and principles.
- Deploy applications to Kubernetes using the CLI.
- Set up a continuous delivery pipeline using Jenkins

Course content:

Module 1: Introduction to Containers and Docker

Acquaint yourself with containers, Docker, and the Google Container Registry.

- ✓ Create a container.
- ✓ Package a container using Docker.
- ✓ Store a container image in Google Container Registry.
- ✓ Launch a Docker container.

Module 2: Kubernetes Basics

Deploy an application with microservices in a Kubernetes cluster.

- ✓ Provision a complete Kubernetes cluster using Kubernetes Engine.
- ✓ Deploy and manage Docker containers using kubectl.
- ✓ Break an application into microservices using Kubernetes' Deployments and Services.

Module 3: Deploying to Kubernetes

Create and manage Kubernetes deployments.

- ✓ Create a Kubernetes deployment.
- ✓ Trigger, pause, resume, and rollback updates.
- ✓ Understand and build canary deployments.

Module 4: Continuous Deployment with Jenkins

Build a continuous delivery pipeline.

- ✓ Provision Jenkins in your Kubernetes cluster.
- ✓ Create a Jenkins pipeline.
- ✓ Implement a canary deployment using Jenkins.

Course pre-requisites:

Basic proficiency with command-line tools and Linux operating system environments, as well as Web server

Systems Operations experience including deploying and managing applications, either on-premises or in a public cloud environment.

Puedes contactar con nuestro departamento comercial para conocer la oferta completa de estas formaciones, así como las fechas disponibles y la posibilidad de crear grupos cerrados.

Escríbenos a consultoria@globalknowledge.es y estaremos encantados de ayudarte.



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