# Architecting with Google Cloud Platform: Design and Process (AGCP-DP)

**ID** GO-AGCP-DP **Duración** 2 días

## Quién debería asistir

This class is intended for the following participants:

- 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

## Este curso es parte de las siguientes Certificaciones

Google Cloud Certified Professional Cloud Architect (PCA)

## Prerrequisitos

To get the most out of this course, participants should have:

- Completed Architecting with !GO-AGCPI 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

## Objetivos del curso

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

## Contenido del curso

### 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

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