

# Architecture Decision Record for Google Cloud Platform

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## Context

Google Cloud Platform (GCP) is a prominent cloud computing platform that offers various cloud services, including computing, storage, and networking solutions. This ADR aims to document the architectural decisions made for developing and implementing a GCP-based infrastructure for our organization.

## Decision

Our organization has decided to use Google Cloud Platform as the cloud infrastructure for our application. The primary considerations for this decision are:

- Cost-effectiveness
- Scalability
- Reliability
- Flexibility

## Selections

The following services from GCP have been selected to meet our requirements:

- Compute Engine for virtual machines and computing resources
- Cloud Storage for object storage and file hosting
- Cloud SQL for managed database service
- Firebase for app development and hosting

## Rationale

- Cost-Effectiveness: Google Cloud Platform is highly cost-effective compared to other cloud platforms, making it an attractive option for organizations with budget constraints.
- Scalability: GCP's easy-to-scale infrastructure enables handling any amount of traffic in real-time.
- Reliability: GCP's managed services offer high reliability, with automated backups and disaster recovery capabilities that ensure high availability of resources and data.
- Flexibility: The platform provides various tools and services across different domains such as AI, data analytics, and IoT, making it highly versatile.

## Consequences

Migrating to Google Cloud Platform will require training our teams on GCP services, re-architecting the application to be compatible with the selected services, and updating the infrastructure code to support GCP services. However, it is expected that once the migration is completed, we will have a highly scalable, reliable, and cost-effective infrastructure for hosting our application. Also, we will need to manage the ongoing costs of provisioning resources on GCP.

## Conclusion

Google Cloud Platform is an excellent choice for our cloud infrastructure due to its cost-effectiveness, scalability, reliability, and flexibility. By utilizing the selected services, we can provide a highly available and robust infrastructure for our application.