Building a scalable mobile application on Google Cloud Platform
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Make the world around you more social
Google Cloud Platform
**Cloud Platform – Compute**

- **Compute Engine**: Virtual machines hosted on Google's infrastructure - [Infrastructure-as-a-Service](#)

- **App Engine**: Deploy your code directly to a fully-managed platform - [Platform-as-a-Service](#)

- **Container Engine**: Run Docker container cluster on Google Cloud Platform – [Container-as-a-Service](#)
Cloud Platform – Storage Options

- **Cloud SQL**: Full SQL support for an online transaction processing (OLTP) system.

- **Cloud Datastore**: Store highly structured objects and query with SQL-like statements.

- **Cloud Storage**: Store immutable blobs larger than 10 MB, such as large images or videos.

- **Cloud BigTable**: High-performance, extremely scalable NoSQL database, scales to billions of entries.
Cloud Endpoint
REST has never been easier!

Automatically generate client libraries to make wiring up the client to your backend easy.

+ Annotation based
+ Easy declaration of REST methods and services
+ support for local testing

1. Annotate  2. Generate  3. Run everywhere  Really?
Cloud Endpoint - Pitfalls
What we should have known before

1. Endpoint methods allow only one object as parameter.

2. Enums are neither returnable nor allowed as parameters.

3. No native data types are returnable. Use Wrappers!

- Getter / Setter require to be named same as the member variables. Otherwise duplicate methods are generated.
Cloud Datastore & Cloud Storage
Save everything in the cloud!

Datastore: Store all entities
Storage: Store all files

Better database design vs. less data operations

Cloud Storage: Convenient API for Images.
Additional Servlet for Files needed.

Manageable with an easy-to-use Interface on Google Cloud Console
Objectify
The simplest convenient ORM for App Engine datastore

Enables you to store and retrieve your Object directly from Cloud Datastore. It is that simple!

+ Annotation based
+ Easy caching and indexing
+ Human-friendly query interface

It just works like a charm!
Google Cloud Messaging - Users want to be notified!

1. Registration
2. GCM ID
3. Send GCM ID to App Engine
4. push messages
Resources & Links

1. Github Repository – App Engine Skeleton
2. Google Cloud Playground (Python)
3. Drop - Website