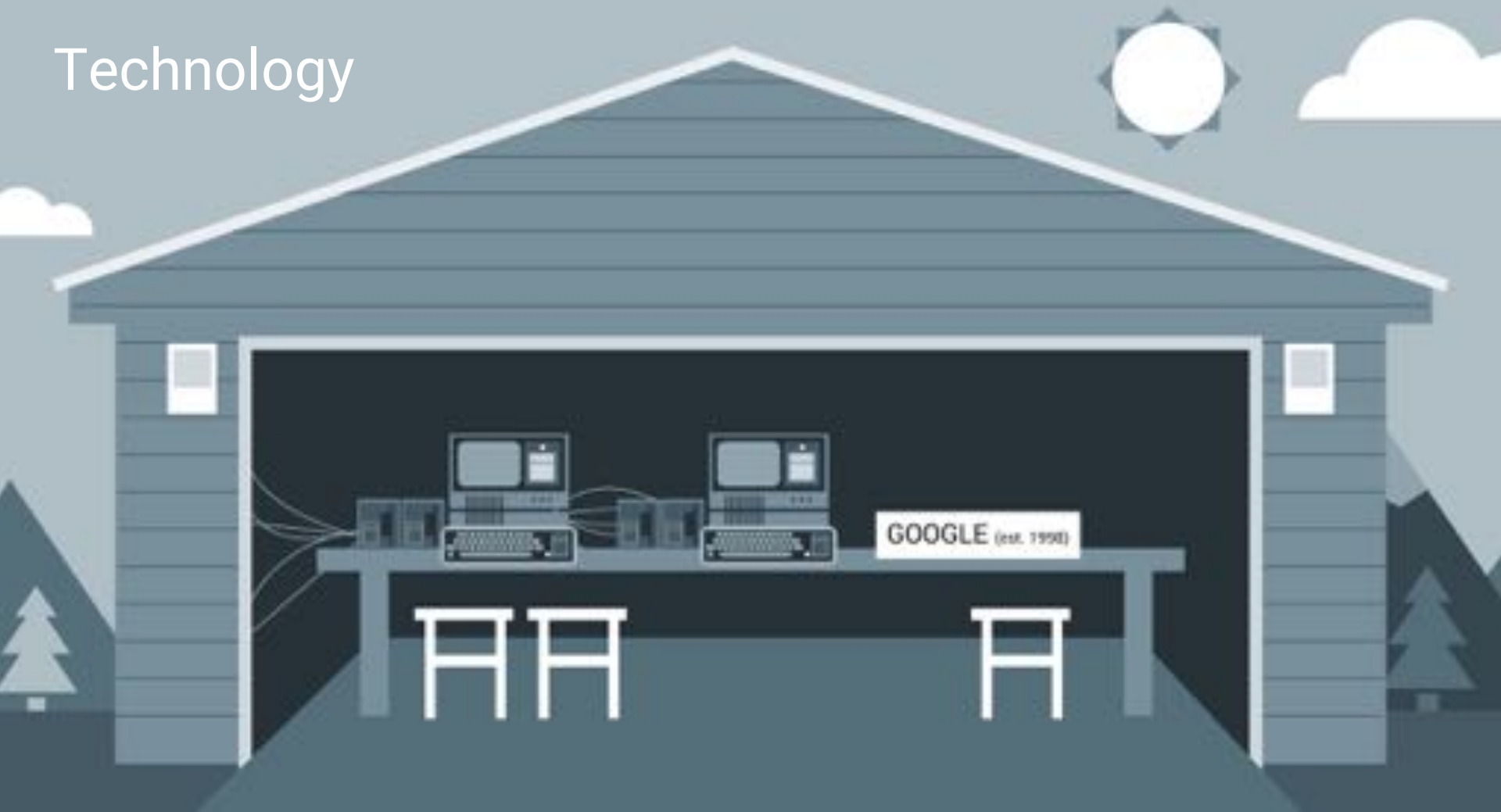


Technology




Technology



Technology



The background features two large, overlapping blue geometric shapes. One is a wide, shallow triangle pointing downwards from the top right, and the other is a narrower, steeper triangle pointing upwards from the bottom right. They meet in the center, creating a V-shape.

“Any sufficiently advanced
technology is
indistinguishable from magic”

Arthur C. Clarke

Science fiction



Science fiction



"Computer, Tea,
Earl Grey, Hot."



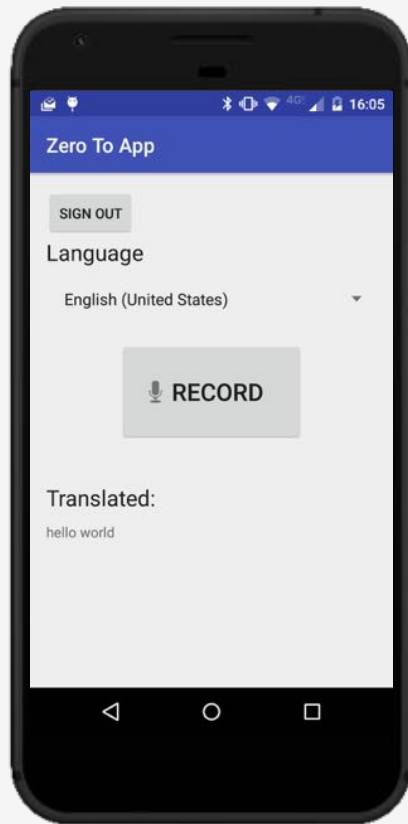
Science fiction



Language is the next barrier



Let's build an app!



Traditional mobile apps require servers

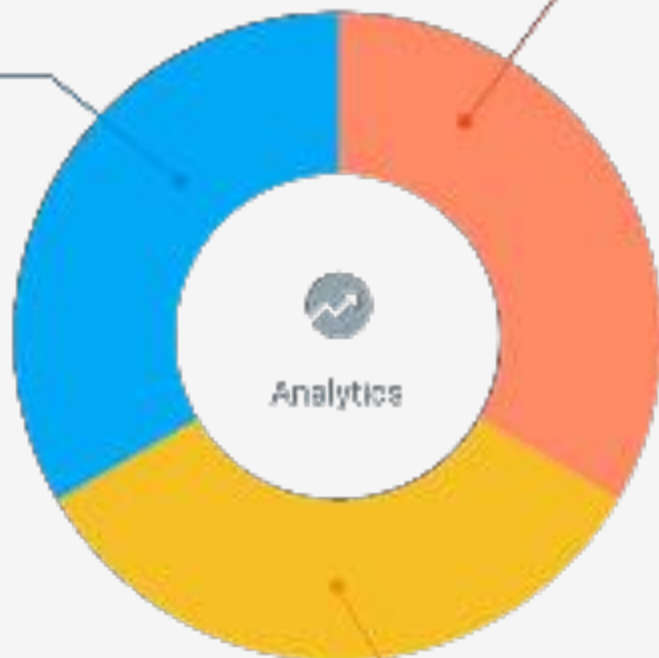


Firebase apps are serverless!



DEVELOP

- Realtime Database
- Authentication
- Cloud Messaging
- Storage
- Hosting
- Test Lab
- Crash Reporting



GROW

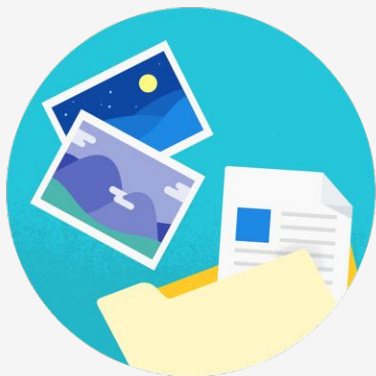
- Notifications
- Remote Config
- App Indexing
- Dynamic Links
- Invites
- AdWords

EARN



AdMob

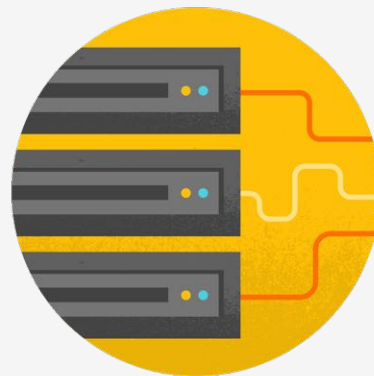
Firebase developer primitives



Cloud Storage



Authentication

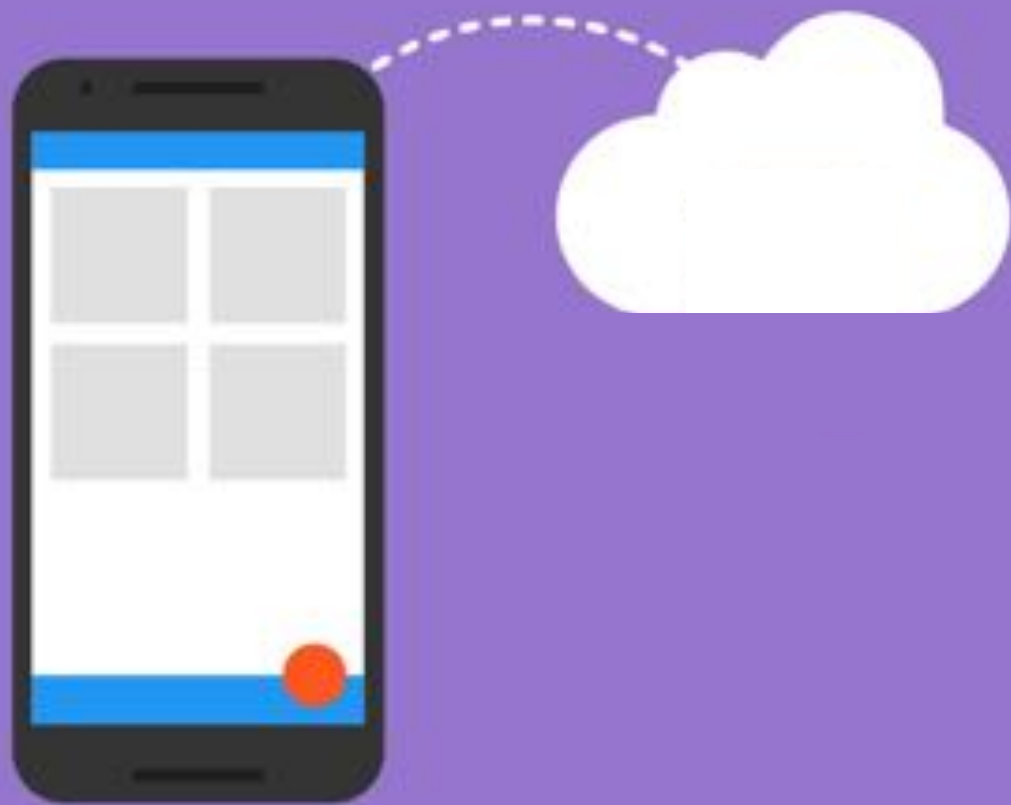


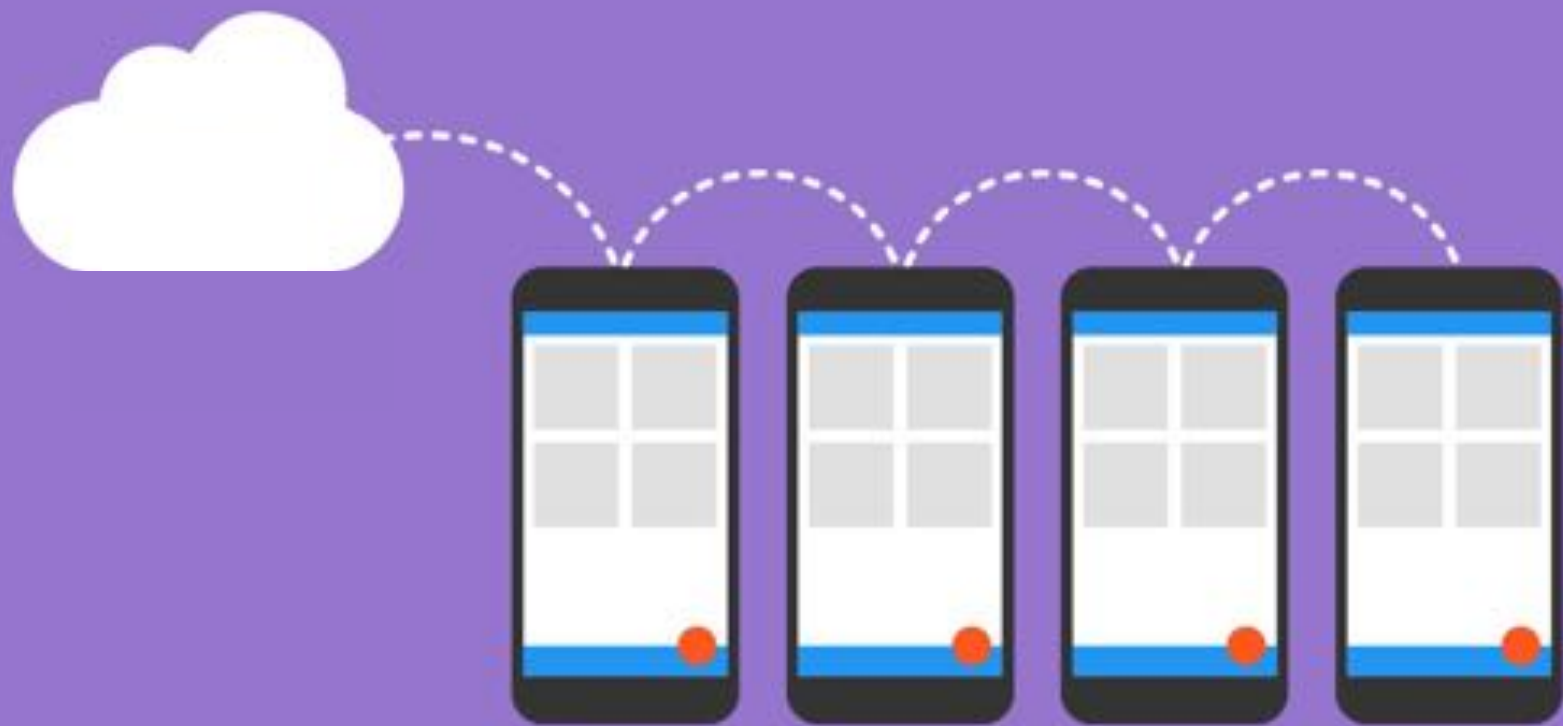
Realtime Database



Cloud Storage

for Firebase







Firestore Auth

Log in users on any provider







Firebase Database

“uploads”



```
graph LR; uploads["uploads"] --- upload_1["upload_1"]; uploads --- upload_2["upload_2"]; upload_1 --- lang_en["language: en"]; upload_1 --- url_en["url: gs://storage.googleapis.com"]; upload_2 --- lang_es["language: es"]; upload_2 --- url_es["url: gs://storage.googleapis.com"];
```

“upload_1”

language: “en”

url: “gs://storage.googleapis.com”

“upload_2”

language: “es”

url: “gs://storage.googleapis.com”

Sync changes in real-time





Enough talk, let's code

Google Cloud

Next

Firebase + Cloud
better together



Add some Machine Learning

Add some Machine Learning



Cloud Speech
API



Cloud Translation
API

Problem solved?



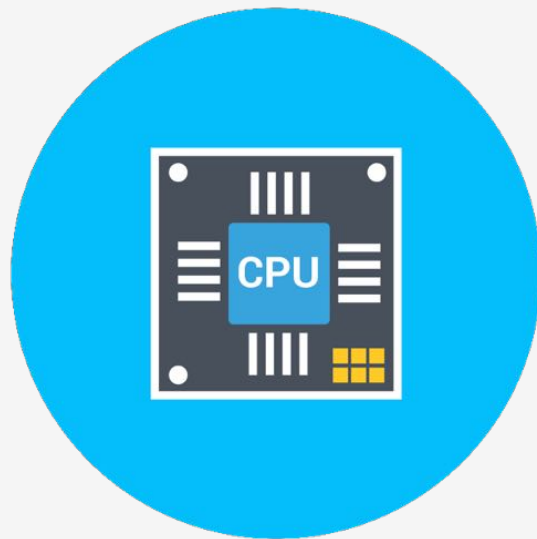
Problem solved?



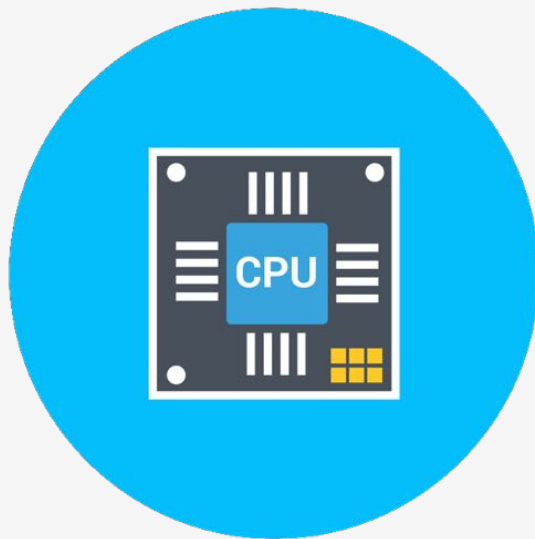
Challenges



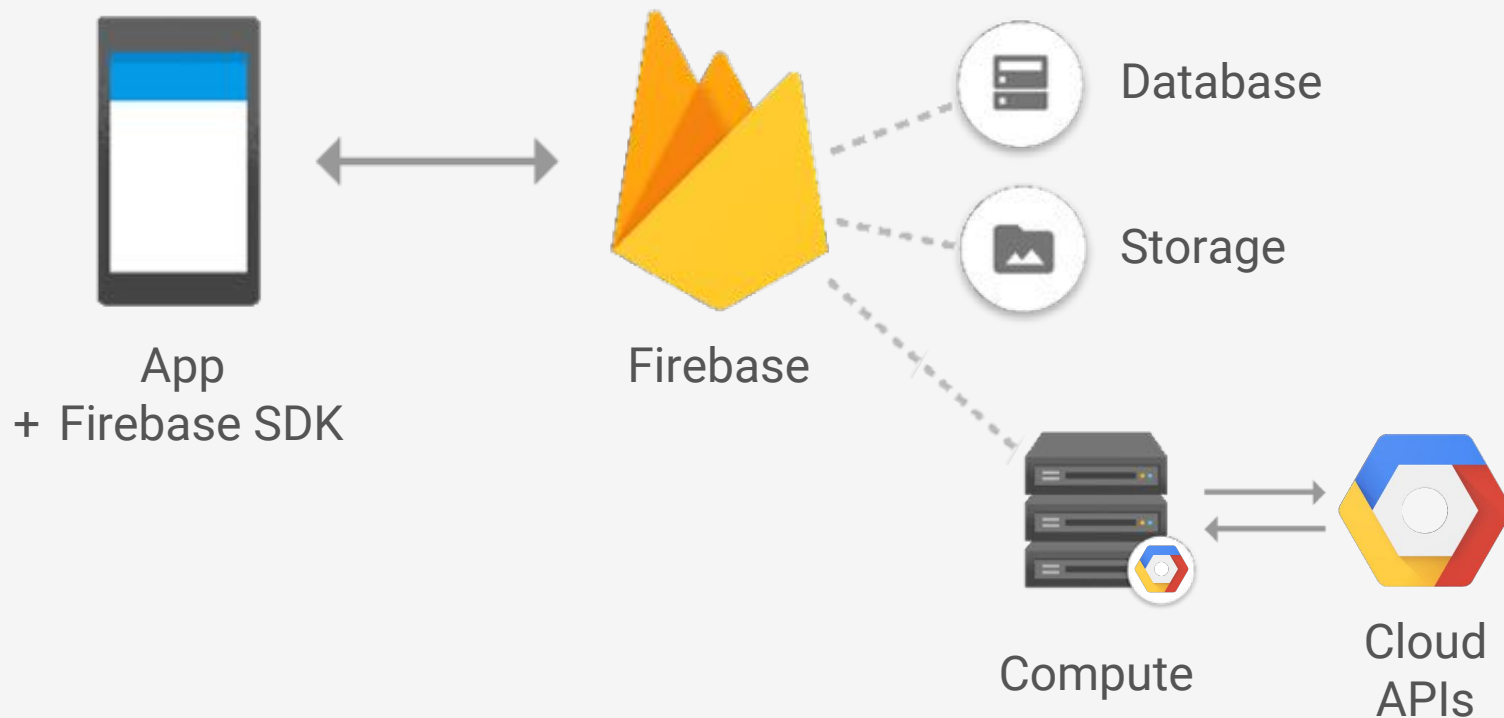
Challenges



Challenges



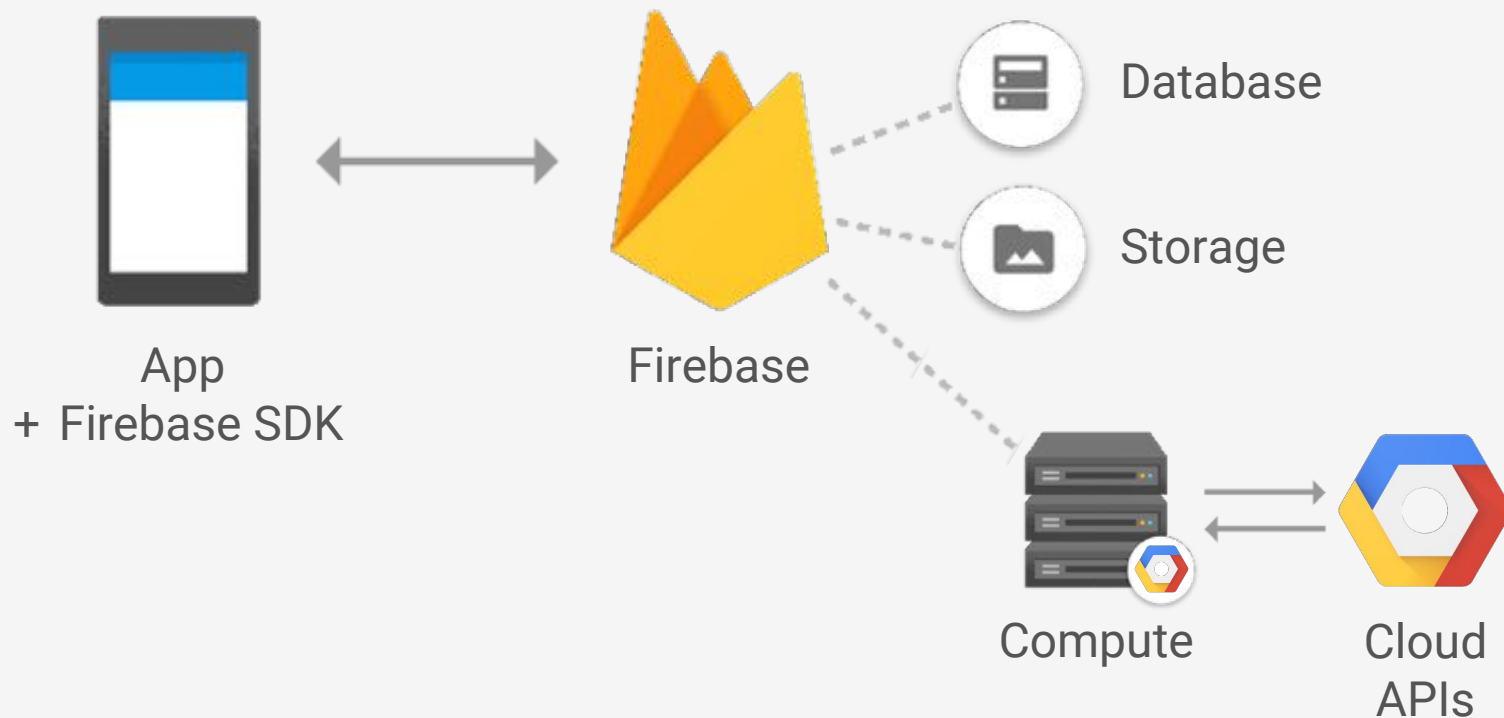
Adding servers



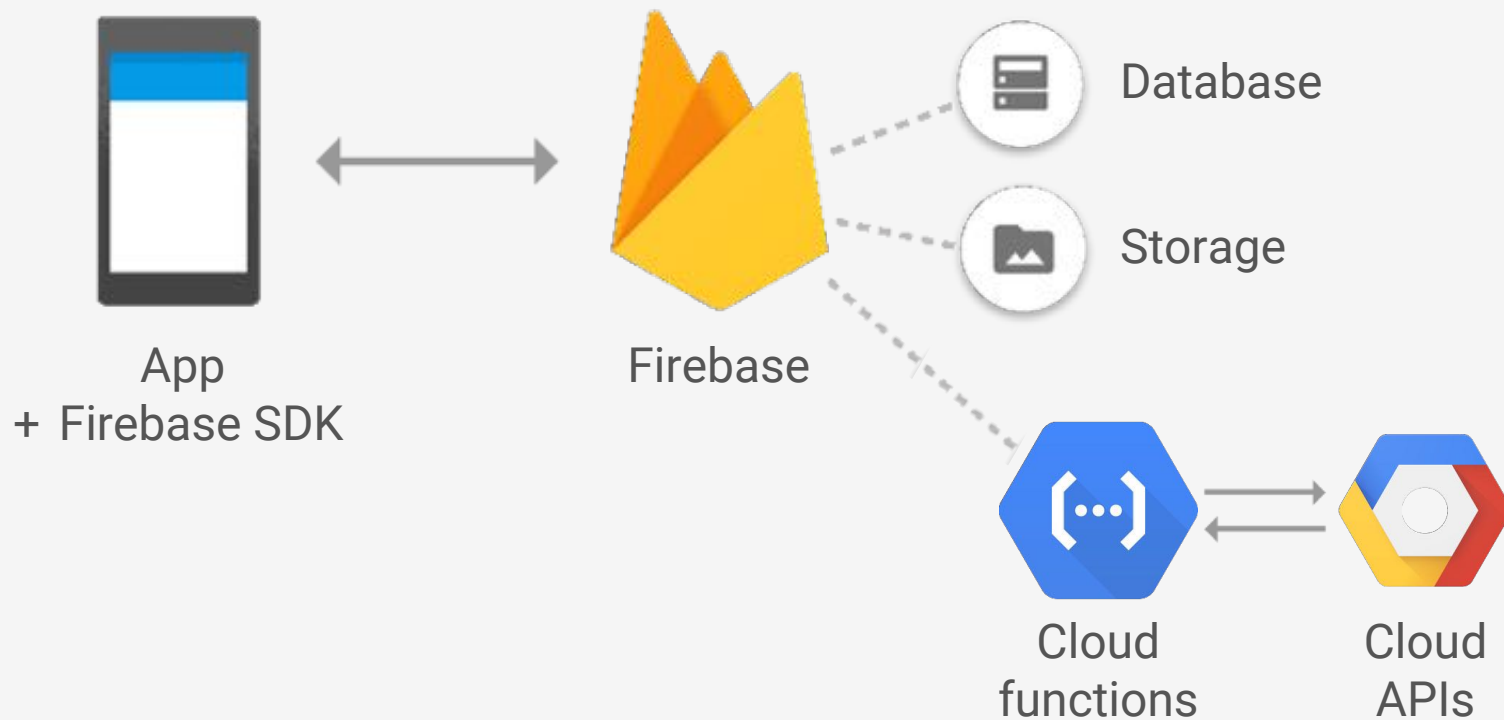




Adding servers?



Adding Cloud functions



New recipe



The background of the slide is a light blue color. A large, dark blue arrow shape points from the left towards the right, starting from the bottom left and extending towards the top right. The text "Enough talk, let's code more" is written in white, sans-serif font, centered within the light blue area.

Enough talk, let's code more

Deploy

```
$ firebase deploy
```

```
=== Deploying to 'babel-fire'...
```

```
i  deploying database, functions, hosting
```

```
i  starting release process (may take several minutes)...
```

```
i  functions: updating function onUpload...
```

```
i  functions: updating function onTranscript...
```

```
...
```

```
✓  functions[onUpload]: Successful update operation.
```

```
✓  functions[onTranscript]: Successful update operation.
```

```
✓  functions: all functions deployed successfully!
```

```
✓  Deploy complete!
```

Project Console:

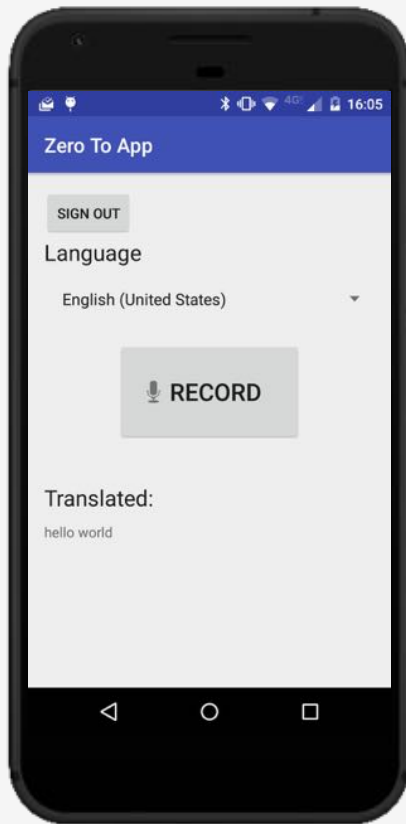
<https://console.firebase.google.com/project/babel-fire/overview>

Hosting URL: <https://babelfire.cloud>

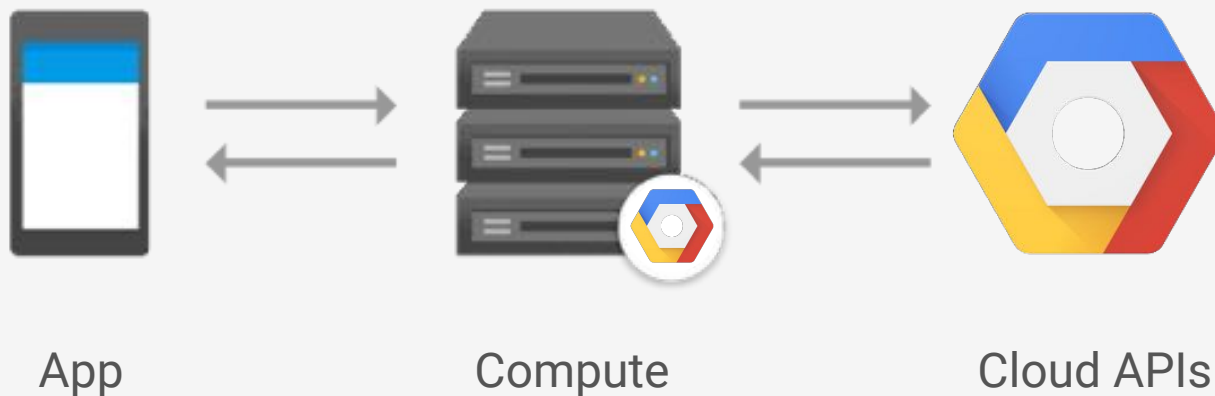


babelfire.cloud

We've built two apps...



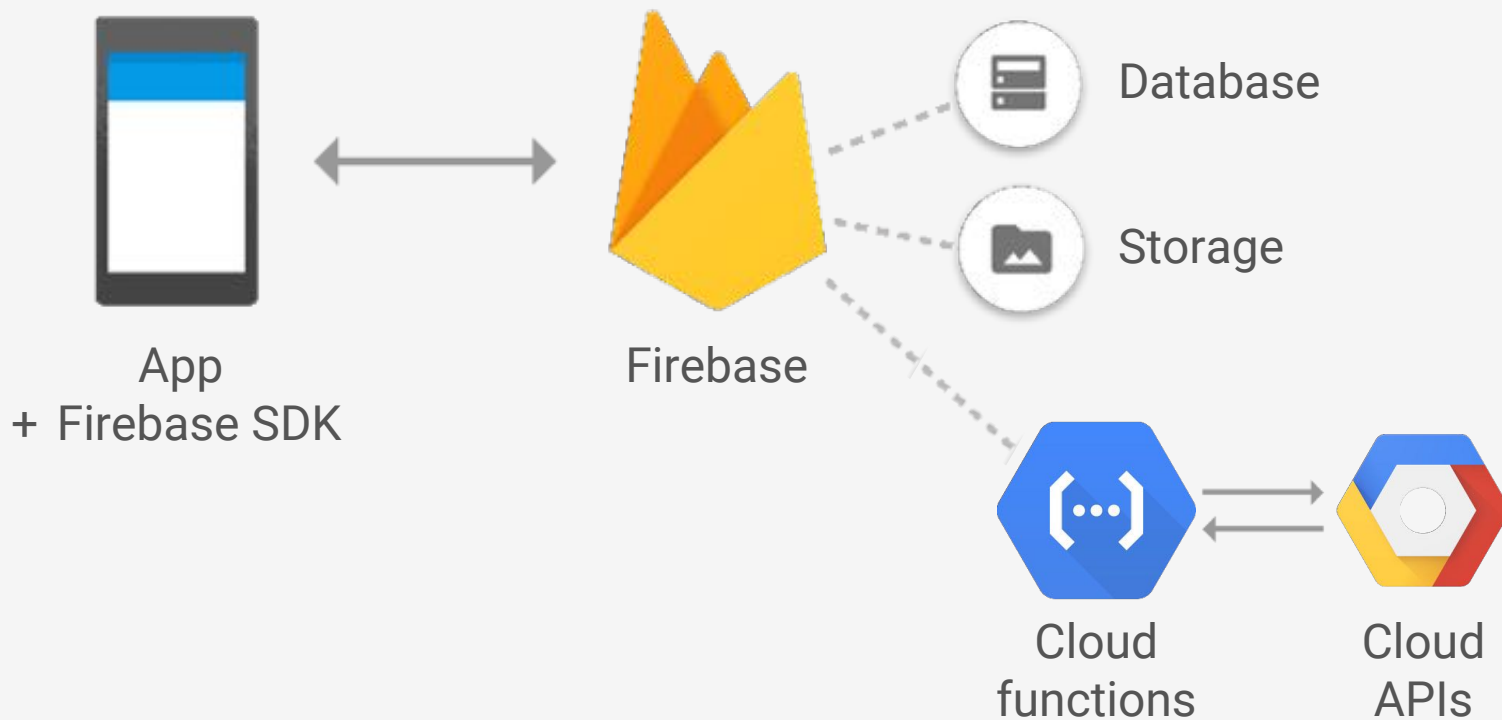
Before today, this is what you would have done



But Mike showed you a better way



Adding Cloud functions







Jen Tong
@MimmingCodes



Mike McDonald
@asciimike



Frank van Puffelen
@puf

Thank you