

Google Cloud Firestore

What is it? Why do we need it?



What is Cloud Firestore?

- Documents and collections with powerful querying
- iOS, Android, and Web SDKs with offline data access
- Real-time data synchronization
- Automatic, multi-region data replication with strong consistency
- Node, Python, Go, and Java server SDKs

What is Cloud Firestore? - Data model

 rooms

 roomA

name : "my chat room"

 roomB

...

 alovelace

name :

first : "Ada"

last : "Lovelace"

born : 1815

 rooms

 roomA

name : "my chat room"

 messages

 message1

from : "alex"

msg : "Hello World!"

 message2

...

 roomB

...

What is Cloud Firestore? - Querying

```
citiesRef.where("state", "==", "CA");
```

```
citiesRef.where("state", "==", "CA").where("population", "<", 1000000)
```

```
citiesRef.orderBy("name").limit(3)
```

```
citiesRef.orderBy("population").startAt(100).limit(100)
```

Why do we need Cloud Firestore?

- Running your own database server and API is hard work
 - Hosting
 - Setup
 - Maintenance
 - Security
 - Scaling
- Messing with databases and APIs takes the fun out of mobile side projects
 - Intermittent connectivity
 - Offline data
 - I just want to make an app!

What about Firebase Realtime Database?

- Still a tiny bit faster
- Support for presence of a user (online status)
- Different pricing model - RTDB might be cheaper for your specific use case
- Battle tested - Cloud Firestore is still in beta

 **PERSONAL OPINION** 

Use Cloud Firestore

Firebase Realtime Database vs. Cloud Firestore

Realtime Database

- JSON tree
- ☐ Data duplication encouraged
- ✓ Offline access
- ✓ Security rules
- ☐ Query: Filter or sort
- ☐ One-time reads are awkward

Cloud Firestore

- Document collection tree
- Deep nesting encouraged
- ✓ Offline access
- ✓ Security rules
- ✓ Full queries
- ✓ One-time reads are a first-class feature

Resources - Read

- [Firestore announcement](#)
- [Firestore vs. Realtime Database](#)
- [Documentation](#)
- [Data model](#)
- [Supported data types](#)

Resources - Watch

- [Getting started with Cloud Firestore on Android](#)

Resources - Do

- [Firestore Android Codelab](#)

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We need it!