

Firestore Introduction

Section 8

In this section

- Firestore - what is it?
- Collections + documents
- Plugging Firestore into the app



Document

Subcollection

Collection

Fields

The screenshot displays the Google Cloud Firestore console interface. The breadcrumb navigation at the top shows the path: `> events > activity-f1`. The interface is divided into three main panes:

- Left Pane (Collections):** Shows a tree view of collections. The `events` collection is selected, and its subcollection `activity-f1` is highlighted. Other collections like `profiles` are visible below.
- Middle Pane (Documents):** Displays a list of documents within the `activity-f1` subcollection. Documents include `activity-f10` through `activity-f14`, `activity-f2` through `activity-f9`, and `activity-p1` through `activity-p2`.
- Right Pane (Fields):** Shows the detailed structure of the selected document `activity-f1`. It includes a `+ Start collection` button and a `+ Add field` button. The document structure is as follows:
 - `attendeeIds` (array):
 - `0`: `"jane-id"`
 - `1`: `"bob-id"`
 - `attendees` (array):
 - `0`:
 - `displayName`: `"Jane"`
 - `id`: `"jane-id"`
 - `isHost`: `true`
 - `photoURL`: `"https://randomuser.me/api/portraits/women/8.jpg"`
 - `1`:
 - `displayName`: `"Bob"`
 - `id`: `"bob-id"`
 - `photoURL`: `"https://randomuser.me/api/portraits/men/1.jpg"`
 - `category`: `"culture"`
 - `city`: `"London"`
 - `date`: `May 1, 2025 at 9:38:16 AM UTC+7`
 - `description`: `"Activity 1 month in future"`
 - `hostUid`: `"jane-id"`

Collection

Can have up to 1 million docs returned per query

No maximum limit of docs in collection (millions+)

Documents

A document can have as many subcollections as you want

Each subcollection can contain documents with their own subcollections. No limit

A document can be up to 1Mb in size (hard limit)

Approx 1 million characters or 20,000 items in an array

Fields

Primitive types

- string
- number (int or double)
- boolean
- null

Complex types

- map (nested objects)
- array (can be mixed types)

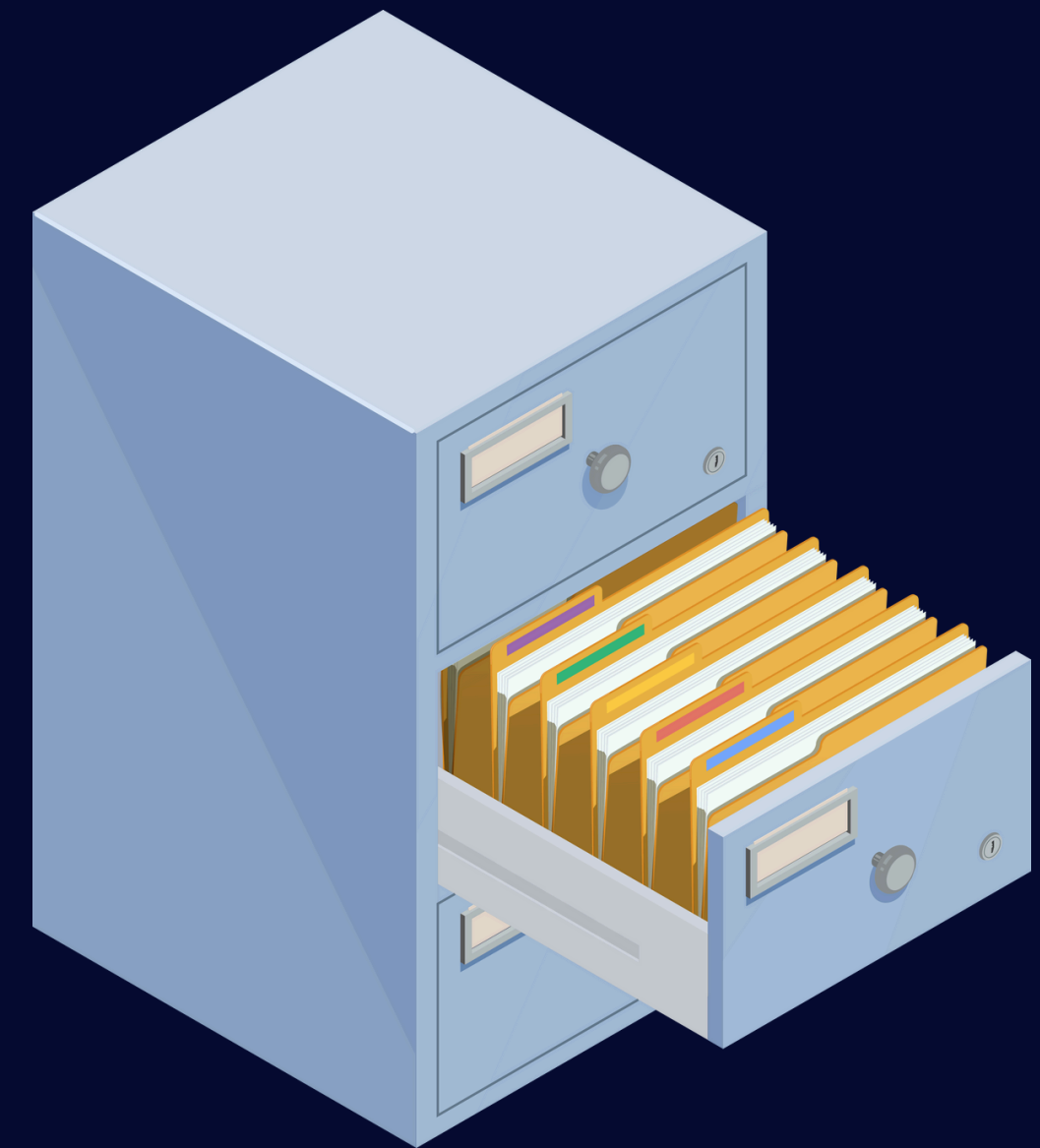
Firestore types

- timestamp
- geopoint
- reference
- bytes

What is Firestore?

- 1 NoSQL Database
- 2 More structured than Firebase
- 3 Easier to query than Firebase
- 4 Highly scalable fast, realtime database

NoSQL vs SQL





The goal of this section

Summary

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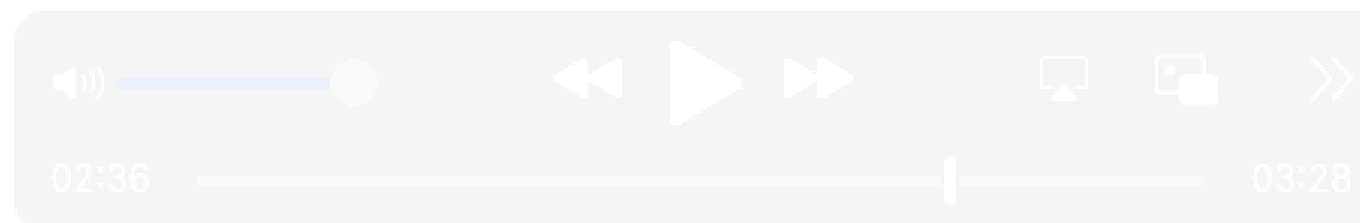


Can I lock the DB down now?



Yes.

```
1 service cloud.firestore {  
2   match /databases/{database}/documents {  
3     match /{document=**} {  
4       allow read;  
5       allow write: if request.auth.uid != null;  
6     }  
7   }  
8 }
```

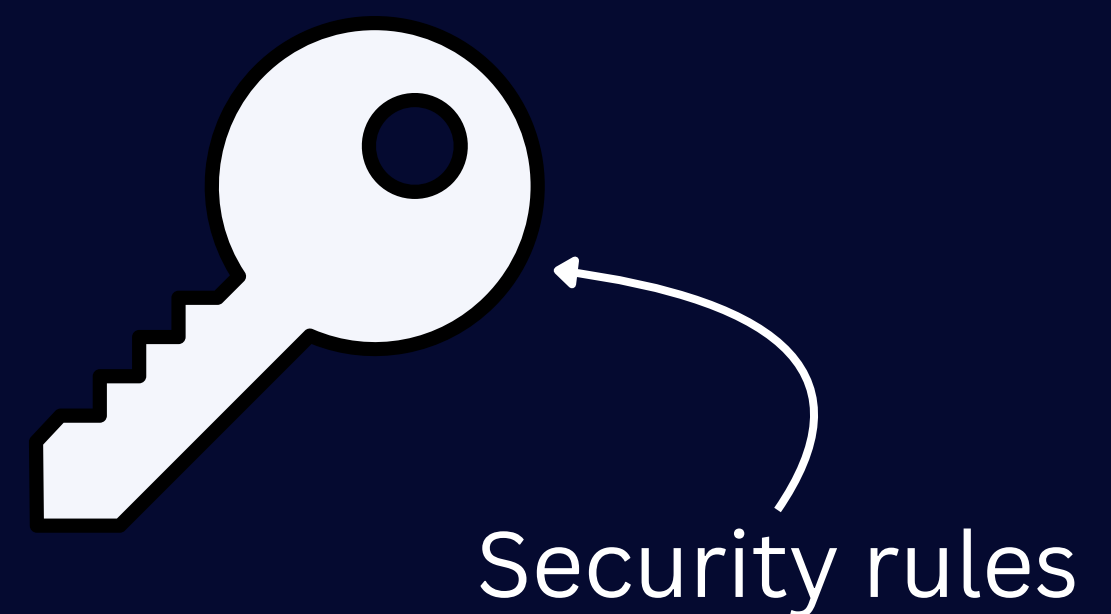
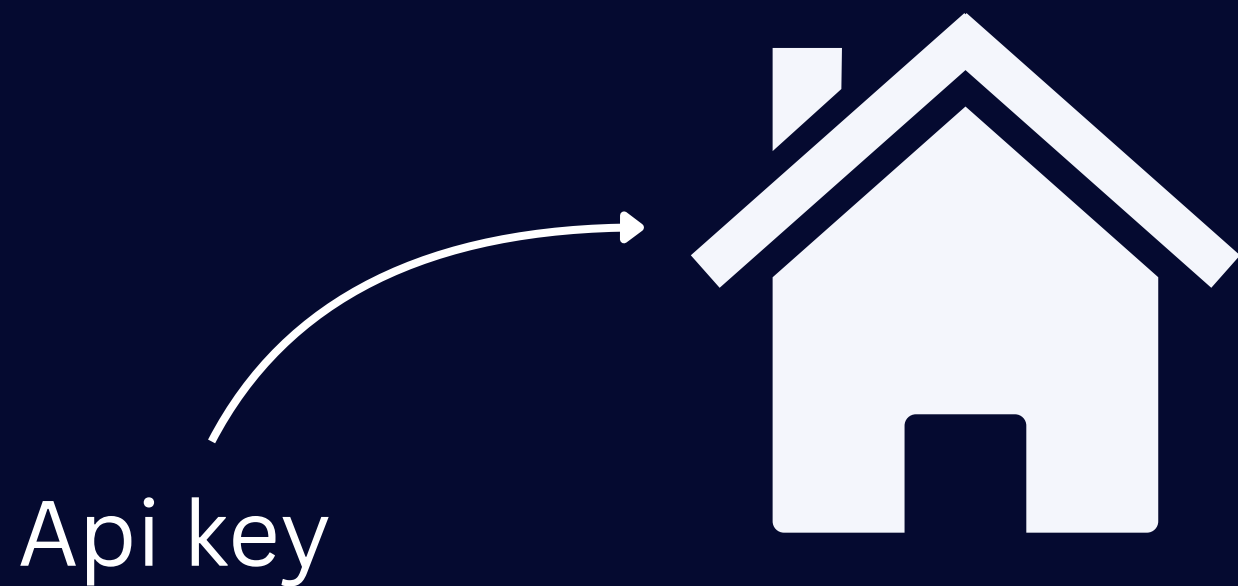




We are storing the API Key on the client. Why did we not secure this?



Think of the ApiKey as an address



Up next