

Firestore Tech Talk

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Firebase

- Real-time database
- Store & sync JSON format data between clients
- Native clients for Javascript, iOS, Android
- Can build client apps with realtime multi-user interactions with no backend

Demo

Create a reference

```
var myDataRef = new Firebase('https://g2po6p17hjm.firebaseio-demo.com/');
```

Write data

```
myDataRef.set('User ' + name + ' says ' + text);
```

Replaces myDataRef location with specified data

Write objects

```
myDataRef.set({name: name, text: text});
```

Read data

```
myDataRef.on('child_added', function(snapshot) {  
  
var message = snapshot.val();  
displayChatMessage(message.name, message.text);
```

JSON tree



Saving data

- `set()` - sets a location
- `update()` - updates some keys without replacing all data
- `push()` - add a list of data to a reference, generating a `uniqueID`

Retrieving data

- Subscribe to a reference location. Any changes generate an event.
- value, child_added, child_changed, child_removed

Work queues

- Supports transactions - can atomically dequeue item for processing
- Enables sharing processing tasks across pool of clients

Status

- Commercial startup in 2011
- >200K users
- Free tier for small scale use, paid tiers for commercial-scale use
- Acquired by Google in Oct 2014

Competitors

- Traditional JSP, .NET, PHP, ... backend
- PubNub - provides realtime data streams
- Realtime .co - realtime messaging infrastructure

Summary

- Enables pushing processing from backend to clients
- Enables social, collaborative apps to be built without a backend
- Best suited for shared global data where clients are using same version of data
- Not suitable for processing tasks where clients are untrusted or for complex queries on data