



AUTH & DATABASE

# AngularFire

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# HELLO WORLD!

My name is Christina (:

Christina Kayastha  
Senior Software Engineer  
Vistaprint, Boston, MA  
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I'm all about:

- Icecream
- Community Events
- Bleeding Edge Technology



1

BUILD FOR MOBILE  
**Progressive Web App**



2

MANAGE STATE  
**Redux**



3

USER INTERFACE  
**Material**



4

AUTH & DATABASE  
**Firebase**



5

ANGULAR APP SPEED RUN!!  
**Everything**



AUTH & DATABASE

# AngularFire

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# AngularFire

WHAT is it ?

HOW can I use it ?

WHY should I care ?



Why should  
I care about  
**REALTIME DATA ?**



Need  
Demand

1. Up to date information
2. Interaction to maintain engagement (UX)



NOT New  
Need  
Demand

1. Up to date information
2. Interaction to maintain engagement (UX)



Innovation



TCP/UDP

INTERNET

# Innovation

```
TALK: (Channel 1)

$$$ Dr. Wool          woolley / cerl          1-28
    Okay, that's better.

    I was hoping Papa Del's is still around - it was the best

$$$ brian             brian dear / uofdel      1-25
    is garcia's still in business?

$$$ Δ                peltz / Δ                5-16
    I haven't eaten at delz for Δ while
    it's better than garcias tho.

$$$ Loren             platte / uni            1-18
    «grin» and «sigh»

$$$ Doug              dub / ngineer           1-8
    hummm
```

## TCP/UDP

# INTERNET

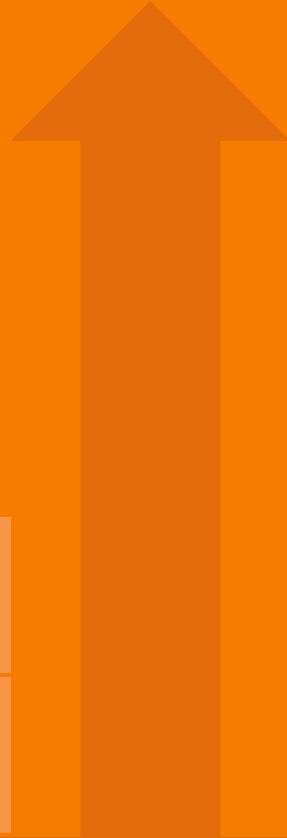
Innovation

EventSource

HTTP

TCP/UDP

INTERNET



# Innovation

## EventSource

## HTTP

## TCP/UDP

## INTERNET



Innovation



EventSource

HTTP

WebSocket

TCP/UDP

INTERNET



EventSource

HTTP

WebSocket

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Innovation



Simple Messaging

EventSource

WebSocket

HTTP

TCP/UDP

INTERNET

Innovation

## Simple Messaging

E

Client

```
var ws = new WebSocket('ws://localhost/');  
  
ws.onmessage = function(evt) {  
  var data = JSON.parse(evt.data);  
  
  if(data.action) {  
    // ^5  
  }  
  
  else if(data.peerId) {  
    var connectTo = data.peerId;  
  }  
};
```

Server

```
// server  
server.on('connection', function(socket){  
  
  socket.send(JSON.stringify({action: 'high=5'}));  
});
```



Innovation

Firebase

Simple Messaging

EventSource

WebSocket

HTTP

TCP/UDP

INTERNET



Real Time Revolution

“

I'm not sure I believe that there is such a thing as “realtime apps” any more. Apps either update instantly and smoothly, or they appear broken. I feel that “realtime” as a feature has moved down the Kano graph. It is much more of an expectation than an “exciter”.

”

~Max Williams, CEO Pusher



Real Time is an  
expectation!

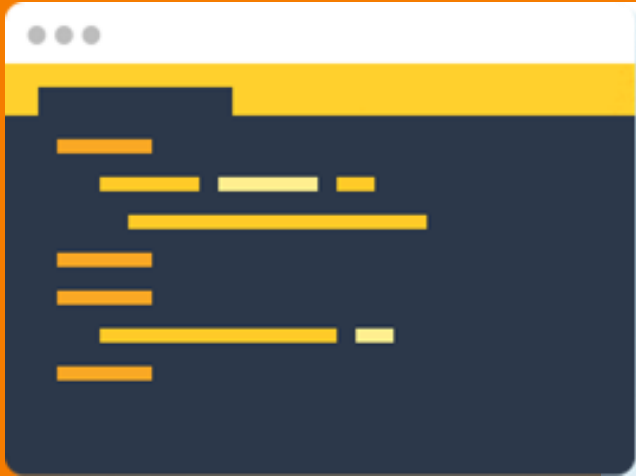


What does  
**FIRE**  
mean anyway?

# Firebase?

an area in a war zone in which  
artillery can be massed to provide  
heavy firepower in support of other  
military units.





Develop  
better Apps



Grow  
your Audience





Firestore is a collection of cross-platform tools to develop & test your app, grow & engage your users.



HOW do I use  
Firebase?

Let's make a game!

# Requirements:

Players can log in to save their music boxes

Players can create new music boxes

Changes are automatically saved

Players can access their saved music boxes

Only the player that created the box can write to it, but anyone can read them

# Authentication:

Players can log in  
to save their game

# Adding data:

Players can create  
new musical boxes

# Updating data:

Updates should  
automatically be saved  
to the database

# Data Retrieval:

Players can access  
saved music boxes



# Data Security Rules:

Only a logged in player  
can write to their data



## To use Firebase:

- 1) Setup the firebase database
- 2) Use the firebase clientside library to listen to db etc



# WHAT is AngularFire?



AngularFire is a library of bindings that makes using Firebase in your App smoother



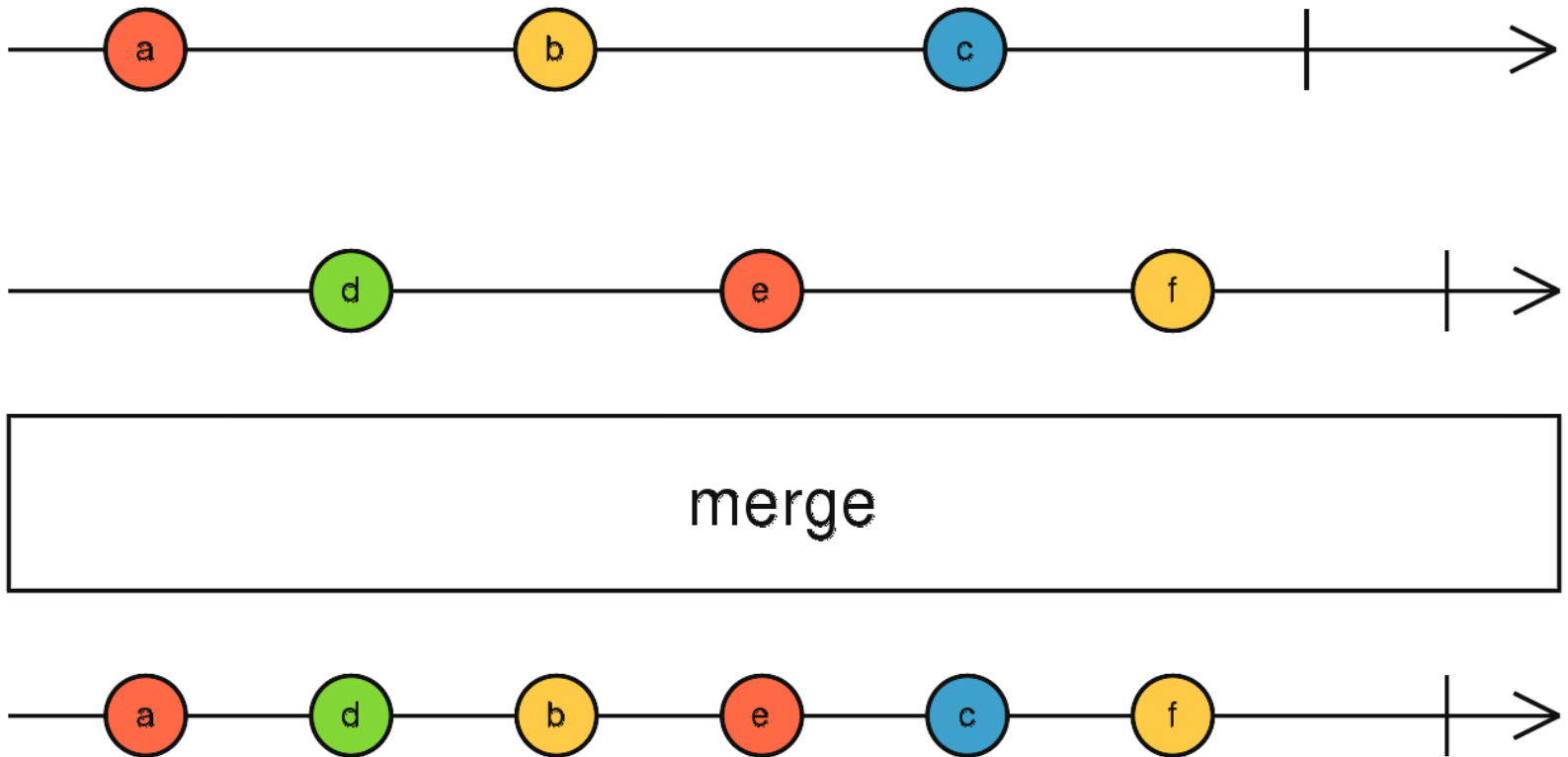
HOW  
can I use  
AngularFire?

# QUICK REVIEW

## Observables

# **The Observable object represents a push based collection**

The Observer and Observable interfaces provide a generalized mechanism for push-based notification, also known as the observer design pattern. The Observable object represents the object that sends notifications (the provider); the Observer object represents the class that receives them (the observer).





```
1▼ const sourceOne = Rx.Observable.create(observer => {  
2    observer.onNext(1);  
3    observer.onNext(2);  
4    observer.onNext(3);  
5  })  
6  sourceOne.subscribe(val => console.log('SourceOne:', val));  
7
```

```
8  
9  const sourceTwo = Rx.Observable.interval(2000);  
10 sourceTwo.subscribe(val => console.log('SourceTwo:', val));
```

```
1▼ const {Component} = ng.core;
2▼ const {bootstrap} = ng.platform.browser;
3
4▼ @Component({
5    selector: 'my-app',
6    template: `
7        <section>
8            <h1>{{number$ | async}}</h1>
9        </section>
10    `
11 })
12▼ class AppComponent {
13▼     constructor(){
14         this.number$ = Rx.Observable.interval(1000);
15     }
16 }
17
18 bootstrap(AppComponent);
19
```

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## To use AngularFire:

- 1) `npm install angularfire2`
- 2) Import/setup your project
- 3) `angularFireDatabase.list('item')`
- 4) `angularFireAuth.authState`



WHY  
should I use  
AngularFire?



# AngularFire is awesome because:

- Easy user Authentication
- Real time Database
- Speeds up Development
- ...



# AngularFire

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WHY should I care ?



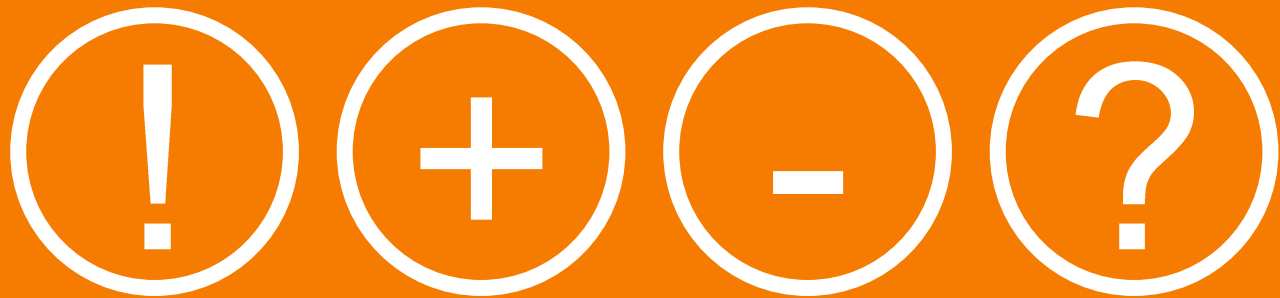
Is AngularFire **READY**  
to use in Prod?



# AngularFire is in v5.0.0-rc.7

- <https://github.com/angular/angularfire2>
- <https://firebase.google.com/>

# THANK YOU!







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