

JAVEBRATT / Ionic & Firebase Magic

Getting Ionic2 RC0 working with Firebase 3 & AngularFire2



This guide is to setup Ionic 2 RC0 with the AngularFire2, if you'd like to work with the JS SDK you can check this [guide here](#).

Is your development environment up to date?

Before writing any code, we are going to take a few minutes to install everything you need to be able to build this app, that way you won't have to be switching context between coding and installing.

The first thing you'll do is install [node.js](#) make sure you get version 6.x, even tho V4 works for most users I found that it didn't install the correct version of a few packages I use, breaking a few things in my apps.

The second thing you'll do is make sure you have Ionic, Cordova and Typescript installed, you'll do that by opening your terminal and typing:

```
$ npm install -g ionic cordova typescript
```

Depending on your operating system (mostly if you run on Linux or Mac) you might have to add **sudo** before the **npm install....** command.

One cool thing to note here is that the Ionic CLI is out of beta. If you aren't new to Ionic you'll remember that we used to install **ionic@beta** instead.

Also, since Ionic released V2RC0 you don't need to install typings anymore, they use **npm @types** now.

Create your app

Now that you made sure everything is installed and up to date, you'll create a new Ionic 2 app.

For this you just need to (*while still in your terminal*) navigate to the folder you'd like to create it in.

For me, it's my Development folder in my ~/ directory:

```
$ cd Development  
$ ionic start debtTracker blank --v2  
$ cd debtTracker
```

What those lines there do is the following:

- First, you'll navigate to the Development folder.
- Second, you'll create the new Ionic 2 app:
 - **ionic start** creates the app.
 - **debtTracker** is the name we gave it.
 - **blank** tells the Ionic CLI you want to start with the blank template.
 - **--v2** tells the Ionic CLI you want to create an Ionic 2 project instead of an Ionic 1 project.
- Third, you'll navigate into the new **debtTracker** folder, that's where all of your app's code is going to be.

From now on, whenever you are going to type something in the terminal it's going to be in this folder, unless I say otherwise.

The npm packages that come with the project

When you use the Ionic CLI to create a new project, it's going to do a lot of things for you, one of those things is making sure your project has the necessary **npm** packages/modules it needs.

That means, the **start** command is going to install **ionic-angular** all of the **angularjs** requirements and more, here's what the **package.json** file would look like:

```
{
  "name": "ionic-hello-world",
  "author": "Ionic Framework",
  "homepage": "http://ionicframework.com/",
  "private": true,
  "scripts": {
    "build": "ionic-app-scripts build",
    "watch": "ionic-app-scripts watch",
    "serve:before": "watch",
    "emulate:before": "build",
    "deploy:before": "build",
    "build:before": "build",
  }
}
```

Depending on when you read this, these packages might change (*specially version numbers*) so keep that in mind, also you can email me at j@javebratt.com if you have any questions/issues/problems with this.

Install the packages you'll need

For this project to work you'll need to install a couple of extra packages.

Specifically Firebase and AF2 (*hey, that's what this post is all about 😊*)

Open your terminal (*you should already be in the project folder*) and install the packages in this order:

```
$ npm install firebase angularfire2 --save
```

NOTE ON RC0: Usually the types ecosystem is strong and all you need to do is go **npm install @types/package_name** to get it working, but Firebase hasn't updated

their type definition to 3.x and they're still using 2.4.x that's for the old console.

So you'll need to do a little hack to get this to work, I hope to remove this section soon:

Configuring Rollup

In their latest update, Ionic2 moved away from webpack to start using Rollup, as they say on [their site](#): Rollup is a next-generation JavaScript module bundle.

And I have to say, we migrated a production app to RC0 and it's working really great, start up time was reduced considerably.

We need to change Ionic's rollup configuration file, to add some things to get Firebase working.

Instead of changing the script, we're going to create our own and then tell Ionic to use it, it might sound complicated, but trust me, it actually isn't.

By the way, you could just edit the original file, but on every update Ionic does to rollup it's going to reset and you'll have to do it again 😊

Create the new files

The first thing you'll do is go to the root of your project and create a folder called **scripts**.

Inside that folder I need you to create a file called **rollup.config.js**.

Now you need to go to **node_modules/@ionic/app-scripts/config/rollup.config.js**. It should look a bit like this:

```
plugins: [  
  builtins(),  
  commonjs(),  
  nodeResolve({  
    module: true,  
    jsnext: true,  
    main: true,  
    browser: true,  
    extensions: ['.js']  
  }),  
  globals(),  
  json()  
]
```

Now you need to copy the entire content of that file and paste it in the new file you just created at **scripts/rollup.config.js**

Tell Ionic to use it!

Now we need to tell Ionic to use our new rollup configuration file instead of the one it brings by default.

For that you'll go to **package.json** and you'll create a new entry in the main node called **config** and point to the direction of the new **rollup.config.js**.

So, open **package.json** and add:

```
"config": {  
  "ionic_rollup": "./scripts/rollup.config.js"  
}
```

That will make your app use the new **scripts/rollup.config.js** for Rollup.

Let's test to see if it's working, open **scripts/rollup.config.js** and on the first line of the file add a `console.log()` to see if it displays on the terminal. It can be whatever you want, we just need to see if it's reading that file.

So it will look like this:

```
};  
  
if (process.env.IONIC_ENV == 'prod') {  
  // production mode  
  rollupConfig.entry = '{{TMP}}/app/main.prod.ts';  
  rollupConfig.sourceMap = false;  
}  
  
module.exports = rollupConfig;
```

Then open your terminal and run `$ npm run build` you should see it displaying the message:

A terminal window with a black background and white text. The prompt is 'rcUpdate > npm run build'. The output shows the Ionic CLI version (0.0.30) and the start of the build process. It includes timestamps for various steps: 'build prod started ...', 'clean started ...', 'clean finished in 16 ms', 'copy started ...', 'ngc started ...', 'lint started ...', 'copy finished in 184 ms', 'lint finished in 1.11 s', 'ngc finished in 26.21 s', and 'bundle prod started ...'. The prompt 'I'm the Hulk' is visible at the bottom.

```
rcUpdate > npm run build  
ionic-hello-world@ build /home/javebratt/Development/blog/rcUpdate  
ionic-app-scripts build  
[09:40:04] ionic-app-scripts 0.0.30  
[09:40:04] build prod started ...  
[09:40:04] clean started ...  
[09:40:04] clean finished in 16 ms  
[09:40:04] copy started ...  
[09:40:04] ngc started ...  
[09:40:04] lint started ...  
[09:40:04] copy finished in 184 ms  
[09:40:05] lint finished in 1.11 s  
[09:40:30] ngc finished in 26.21 s  
[09:40:30] bundle prod started ...  
I'm the Hulk
```

By the way, I wrote a book about AngularFire2, you can check it out here:

Buy my Book

Now that we know we're in the right file (`scripts/rollup.config.js`) we're going to add 2 things.

First, we'll add `useStrict: false`, to the main node inside the `rollupConfig` variable, this to avoid `eval` errors from preventing your build.

Now we need to tell our new config file to use our commonjs modules (in this case is just Firebase)

```
commonjs({
  include: [
    'node_modules/rxjs/**', // firebase needs rxjs to avoid build errors
    'node_modules/firebase/**', // here we're calling firebase.
    'node_modules/angularfire2/**' // here we're calling angularfire2.
  ],
  namedExports: {
    'node_modules/firebase/firebase.js': ['initializeApp', 'auth', 'database'],
    'node_modules/angularfire2/node_modules/firebase/firebase-browser.js':
['initializeApp', 'auth', 'database']
  }
}),
```

In the end the new **scripts/rollup.config.js** file should look like this:

```
};

if (process.env.IONIC_ENV == 'prod') {
  // production mode
  rollupConfig.entry = '{{TMP}}/app/main.prod.ts';
  rollupConfig.sourceMap = false;
}

module.exports = rollupConfig;
```

Now we need to do one last thing to get Firebase working, we need to add it to our **tsconfig.json** file, so go ahead and add a **types** option inside the main node:

```
"types": [
  "firebase"
],
```

In the end the file should look like this:

```
},
"types": [
  "firebase"
],
"exclude": [
  "node_modules"
],
"compileOnSave": false,
"atom": {
  "rewriteTsconfig": false
}
}
```

Now you can initialize firebase by going to `src/app/app.module.js` and importing everything you need from Firebase:

```
export const firebaseConfig = {
  apiKey: "",
  authDomain: "",
  databaseURL: "",
  storageBucket: "",
  messagingSenderId: ""
};

const myFirebaseAuthConfig = {
  provider: AuthProviders.Password,
  method: AuthMethods.Password
}
```

And then add the initialize to `@NgModule`:

```
@NgModule({
  declarations: [
    MyApp,
    HomePage
  ],
  imports: [
    IonicModule.forRoot(MyApp),
    AngularFireModule.initializeApp(firebaseConfig, myFirebaseAuthConfig) //
    Here!
  ],
  bootstrap: [IonicApp],
  entryComponents: [
```

In the end the file should look like this:


```
import { NgModule } from '@angular/core';
import { IonicApp, IonicModule } from 'ionic-angular';
import { MyApp } from './app.component';
import { HomePage } from '../pages/home/home';

import { AngularFireModule, AuthMethods, AuthProviders } from 'angularfire2';

// AF2 Settings
export const firebaseConfig = {
  apiKey: "AIzaSyALKfevapB0YK202f6k5mPPfMrT1MHDv5A",
  authDomain: "bill-tracker-e5746.firebaseio.com",
  databaseURL: "https://bill-tracker-e5746.firebaseio.com",
```

This will give you access to **angularfire2** and **firebase** in your app, all you need to do is:

```
import { AngularFire } from 'angularfire2'
import firebase from 'firebase'; // Instead of '* as firebase'.
```

You can find your **firebaseConfig** data in the [Firebase's Console](#).

You just go to the console, click on your app (*or create a new one*) and there it's going to give you a few choices.

You'll pick **Add Firebase to your webapp** because remember we are going to use a mix of AF2 with the JS SDK.

Next Steps

Have you gotten this to work? Are you having any trouble doing it? Just let me know!

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39 Comments

JAVEBRATT

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**Alejandro Betancourt** • 3 days ago

```
My rollup.config.js is different: var nodeResolve = require('rollup-plugin-node-resolve');
var commonjs = require('rollup-plugin-commonjs');
var globals = require('rollup-plugin-node-globals');
var builtins = require('rollup-plugin-node-builtins');
var json = require('rollup-plugin-json');
// https://github.com/rollup/rollup...
var rollupConfig = {

  entry: 'src/app/main.dev.ts',

  sourceMap: true,

  format: 'iife',

  dest: 'main.js',

  plugins: [
    builtins(),
    commonjs(),
```

[see more](#)

1 ^ | v • Reply • Share ›

**Jorge Vergara** Mod ➔ Alejandro Betancourt • 3 days ago

Like I said in the comment before :P

^ | v • Reply • Share ›

**Mathieu Henrique Souza** • 2 days ago

**matheus henrique souza** • 3 days ago

Didn't work here. Someone else's rollup.config.js looks like mine(before any changes):

```
var nodeResolve = require('rollup-plugin-node-resolve');
var commonjs = require('rollup-plugin-commonjs');
var globals = require('rollup-plugin-node-globals');
var builtins = require('rollup-plugin-node-builtins');
var json = require('rollup-plugin-json');
```

```
// https://github.com/rollup/roll...
```

```
var rollupConfig = {
  /**
   * entry: The bundle's starting point. This file will
   * be included, along with the minimum necessary code
   * from its dependencies
   */
  entry: 'src/app/main.dev.ts',
```

```
/**
```

[see more](#)

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**Jorge Vergara** Mod ➔ Matheus Henrique Souza • 3 days ago

Ionic pushed 2 updates on rollup today, I'll update tomorrow accordingly

1 ^ | v • Reply • Share ›

**Alex** • 4 days ago

Thanks for doing this. Please, please, make a repository. While the article is clear, I love getting hands on with fit clone @repository.

1 ^ | v • Reply • Share ›

**Jorge Vergara** Mod ➔ Alex • 4 days ago

I need to change a few things first, there have been some updates on Ionic's side so need to 'stabilize' everything first and then push the update :-)

^ | v • Reply • Share ›

**Alex** ➔ Jorge Vergara • 4 days ago

Thanks, can you link me that discussion of changes?

^ | v • Reply • Share ›

**Jorge Vergara** Mod ➔ Alex • 4 days ago

Yeah,

For @ionic/app-scripts: <http://ionicframework.com/docs...>

And for third party libs: <http://ionicframework.com/docs...>

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**Alex** ➔ Jorge Vergara • 4 days ago2
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great thank you.

^ | v • Reply • Share ›



Jorge Vergara Mod ➔ Alex • 3 days ago

You're welcome :)

^ | v • Reply • Share ›



Adir Zoari • a day ago

hello, do i need to add this(with my details config) in index.html file?
because i saw youtube video that explain to add it also.

```
<script src="https://www.gstatic.com/fireba..."></script>
<script>
// Initialize Firebase
var config = {
  apiKey: "",
  authDomain: "",
  databaseURL: "",
  storageBucket: "",
  messagingSenderId: ""
};
firebase.initializeApp(config);
</script>
```

^ | v • Reply • Share ›



Jorge Vergara Mod ➔ Adir Zoari • 18 hours ago

No, that's when you are initializing a web app using the ``<script>`` tag method, we're working directly with the npm packages.

^ | v • Reply • Share ›



Holla • 2 days ago

Hi Jorge, thanks for this awesome article - will try it out when the update is here. So now to my real question: The firebase javascript sdk doesn't support offline storage. I would like to use @ionic/storage and service workers or appcache for offline fallback. Have you tried something similar already? Can you give me some hints if that is feasible? Or is that something you already cover in your book?

^ | v • Reply • Share ›



Jorge Vergara Mod ➔ Holla • 18 hours ago

I haven't done much work with offline apps, you can certainly get it to work, I know companies who use Ionic2 for offline first apps, but that's not something I cover on my book.

^ | v • Reply • Share ›

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Holla ➔ Jorge Vergara • 17 hours ago

okay thanks for the quick reply. If you ever dig into offline first apps with firebase and ionic2, please let me know.

^ | v • Reply • Share ›

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Let's talk!



Jorge Vergara Mod → Holla • 17 hours ago

One of Firebase co-founders told me via twitter (about 6 months ago) that they didn't have a timeline for it, but they wanted to add offline support to Ionic apps, maybe via AngularFire2.

If you check the Firebase docs, you'll see they have offline support by default for native android and iOS SDKs.

^ | v • Reply • Share ›



Holla → Jorge Vergara • 13 hours ago

Probably you have already seen this Google I/O presentation:

Progressive Web Apps on Firebase - Google I/...



Michael Bleigh is using PolymerFire for offline storage. I don't really understand why they don't test with a support library only for offline storage instead of combining it with PolymerFire.

^ | v • Reply • Share ›

Let's talk!



Jorge Vergara Mod → Holla • 13 hours ago

Yeah, I want something a little more native, it hasn't been a priority to me since I don't really use it, but there needs to be a better solution for this, just like they do for iOS and Android native SDKs

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Alejandro Betancourt • 3 days ago

The code is not working for me

^ | v • Reply • Share ›

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Jorge Vergara Mod → Alejandro Betancourt • 3 days ago

Hey Alejandro, Ionic pushed 2 updates today on rollup, so I'm going to update this tomorrow :)

^ | v • Reply • Share ›

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Prag → Jorge Vergara • a day ago

Hey, thanks for this. Is this updated? Having some trouble getting it to work.

1 ^ | v • Reply • Share ›

1

**Jorge Vergara** Mod → Prag • a day ago

Yeah, updated yesterday to match the new updates from @ionic/app-scripts what kind of trouble are you running into?

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**Prag** → Jorge Vergara • a day ago

node_modules/angularfire2/angularfire2.d.ts(13,66): error TS2503: Cannot find namespace 'firebase'

I went the route of directly editing the rollup.config.js file instead of creating one.

1 ^ | v • Reply • Share ›

**Chris** → Prag • a day ago

I also received the "Cannot find namespace 'firebase'" error. I got this to work by making tsconfig.json

```
"types": [
  "firebase"
],
```

a child of compilerOptions . I don't think the code above is correct.

^ | v • Reply • Share ›

**Jorge Vergara** Mod → Chris • a day ago

Hey Chris, that's how it's shown in the example, if you copy/paste the code you'll see "types": ["firebase"] there.

I had stated in the post to put it in the "main" node because for me the "compilerOptions" was the main node, but I just changed it to reflect that.

^ | v • Reply • Share ›

**Jorge Vergara** Mod → Prag • a day ago

Ok, what version of @ionic/app-scripts are you using? They recently pushed a new update with breaking changes, also you should think about using the custom config, because on every update for @ionic/app-scripts the file it's going to get reset.

^ | v • Reply • Share ›

**Prag** → Jorge Vergara • a day ago

I think the latest, but I'm not sure how to tell what version I actually have pulled down.

The only difference I see between my rollup.config.js and yours is that mine pulls ngTemplate in, and the 'entry' is set to "../tmp/app/main.dev.js" rather than "src/app/main.dev.ts".

I'll switch to the custom config, I had done that before and didn't have luck, so I was just trying to work back and reduce variables.

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Let's talk!

2

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Jorge Vergara Mod → Prag • a day ago

You can see the version in package.json file, but it sounds you are describing an older version (they pushed an updated Thursday night)

^ | v • Reply • Share ›



Prag → Jorge Vergara • a day ago

I started a new project from scratch, and it seems to be okay, thanks a ton!

1 ^ | v • Reply • Share ›



Jorge Vergara Mod → Prag • 18 hours ago

No problem, glad it's working now!

^ | v • Reply • Share ›



Alejandro Betancourt → Jorge Vergara • 3 days ago

Thank you, i will waiting for the update

1 ^ | v • Reply • Share ›



Jorge Vergara Mod → Alejandro Betancourt • 3 days ago

No problem, I'm kind of excited about how fast they're updating and fixing stuff

^ | v • Reply • Share ›



Chris Griffith • 5 days ago

One minor error: In your sample package.json, you show @types/request as a dev dependancies. This is not there until you execute: npm install @types/request@0.0.30 --save dev --save-exact. The base Ionic package.json does not have it.

^ | v • Reply • Share ›



Jorge Vergara Mod → Chris Griffith • 5 days ago

Yeah, I've been trying to modify and update some stuff, the Ionic team is working hard on getting this working easier, so I removed it from the code, testing to see if it works without it.

^ | v • Reply • Share ›



John Hamman • 6 days ago

I am getting the following error on "ionic serve" in the browser:
firebase.js:10 Uncaught TypeError: Cannot read property 'navigator' of undefined

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Jorge Vergara Mod → John Hamman • 4 days ago

I don't know what's the main cause of that error, but several people on my list have been able to fix it just be updating everything to latest versions and trying again following the steps carefully.

^ | v • Reply • Share ›

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Juan Escobar • 6 days ago



Juan Escobar • 6 days ago

When I make the change to rollup.config.ts I get the following error:

Error: Module /node_modules/ionic-native/dist/index.js does not export StatusBar (imported by /.tmp/app/app.component.js)

^ | v • Reply • Share ›



Jorge Vergara **Mod** ➔ Juan Escobar • 6 days ago

Where do you get the error?

^ | v • Reply • Share ›



Juan Escobar ➔ Jorge Vergara • 6 days ago

When running "ionic serve", I've fixed it by adding this line to rollup.config -> plugins -> commonjs:

```
'node_modules/ionic-native/**'
```

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