Mobile Application Development



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Android & Firebase Part 4

Firebase Integration









- ☐ Firebase history
- ☐ The all new Firebase
- Real-time database
- Authentication
- Storage
- Remote config
- Hosting

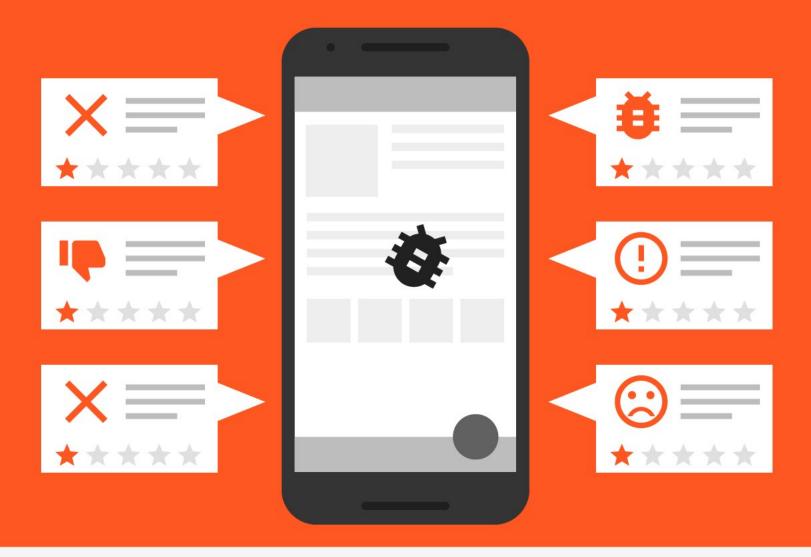
- Crash reporting
- ■Test lab
- Firebase cloud messaging
- □ Dynamic links
- App indexing
- Analytics
- ☐ CoffeeMate Highlights & Demos along the way...





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Crash Reporting

And finding the root cause



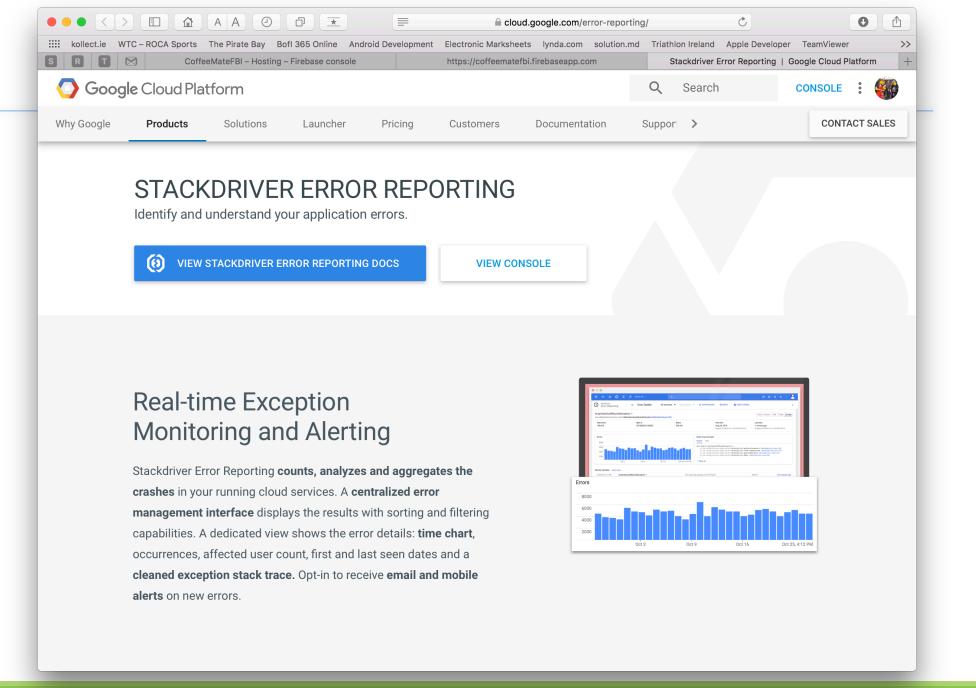
Crash Reporting

- Monitor fatal and non-fatal errors.
- ☐ Errors are grouped into clusters of similar stack traces.
- ☐ Find bug cause easily Report consists of stack trace, device characteristics, performance etc.
- Enable email alerts to be notified of a new crash anytime.
- ☐ Integrate with analytics to find order of events that caused the crash.
- Seamless across android and iOS.



Implement Crash Reporting

- Connect your app with firebase console.
- ☐ Add firebase dependency into gradle.
- Add custom logs wherever required.
 - FirebaseCrash.log("SQLite syntax error");
- □ Report server side errors with Google Stackdriver Error reporting.





Crash reporting with proguard

- ☐ In proguarded apps the stack trace is not sufficient to identify the root cause.
- ☐ Usually we view the mapping files and try to make sense out of it.
- □ All of this is done by firebase. Just upload the mapping files and you will see meaningful stack traces.































```
libcore.io.IoBridge.open (IoBridge.java:452)
java.io.FileInputStream.<init> (FileInputStream.java:76)
java.io.FileInputStream.<init> (FileInputStream.java:103)
com.tutsplus.myfirebaseapp.MainActivity.onCreate (MainActivity.java:22)
android.app.Activity.performCreate (Activity.java:6237)
android.app.Instrumentation.callActivityOnCreate (Instrumentation.java:1107)
android.app.ActivityThread.performLaunchActivity (ActivityThread.java:2369)
android.app.ActivityThread.handleLaunchActivity (ActivityThread.java:2476)
android.app.ActivityThread.-wrap11 (ActivityThread.java)
android.app.ActivityThread$H.handleMessage (ActivityThread.java:1344)
android.os.Handler.dispatchMessage (Handler.java:102)
android.os.Looper.loop (Looper.java:148)
android.app.ActivityThread.main (ActivityThread.java:5417)
java.lang.reflect.Method.invoke (Method.java)
com.android.internal.os.ZygoteInit$MethodAndArgsCaller.run (ZygoteInit.java:726)
com.android.internal.os.ZygoteInit.main (ZygoteInit.java:616)
```

Caused by android.system.ErrnoException: open failed: ENOENT (No such file or directory)

Data



Country Code: 360 Carrier Code: 260

Carrier: Android

Locale: -



VM free: 746.07KB

VM total: 5.16MB

VM max: 64MB

Battery level: -

Charging state: Charging AC

Connection State:

Wwan

Device data

Manufacturer:

Unknown Model:

Android SDK built for

x86 Board: Unknown

Android API: 23

Android OS: 6.0 Brand: Android

RAM: 880.51MB

Available on disk: -



Sep 2, 2016, 10:56:09

Error data

Date:







Some important points though....

- □ Do not think RDBMS, think JSON. How data should be structured is very important.
- ☐ Firebase has a recycler view, that integrates with real time database smoothly without any listeners.
- ☐ Test lab which is available in paid plan (Blaze), is an amazing feature for testing your app on different real and virtual devices.
- □ Set developer mode to true when testing remote config.



References & Links

- Presentation by Kaushal Dhruw & Shakti Moyal 2016
- → https://firebase.google.com
- ☐ Demo app available at https://goo.gl/WBP5fR



Questions?