



THE DEVELOPER'S CONFERENCE

Trilha – Internet das Coisas

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Desenvolvedor Android Kanamobi

Professor UPF - Senac, FADEP

Agenda

- Quem Sou
- Hub de Serviços
- Firebase
- Conclusão
- Perguntas



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Quem Sou



- Ricardo da Silva Ogliari
- Dev Android Kanamobi
- Professor UPF (Universidade de Passo Fundo)
- Professor convidado Senac, FADEP..
- Things Hacker Team

Hub de Serviços



- Sou do mundo de software, formado em Ciência da Computação;
- Eu amo Arduino, Raspberry Pi e similares, mas me saio melhor com software;
- Unir os dois mundos... focando na utilização dos dados gerados pela IoT;

Hub de Serviços



- Protocolo Firmata
- Arduino e JavaScript / Jhonny Five
- Temboo
- Pubnub - PubSub
- Blink
- Wylidrin
- Android Things
- Firebase

Hub de Serviços



- Firebase se saiu melhor:
 - Quantidade de serviços;
 - Facilidade de uso;
 - Proliferação de linguagens e plataformas;
 - Meu conhecimento prévio com ferramentas Google;

Firebase



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- Criado pela Envolve em 2011;
- Firebase Inc. surgiu em 2012;
- Em 2014 foi adquirido pelo Google;
- Apresentado no Google IO em 2016;
- Se lembram do Parse?

Firebase



Build better apps

- Auth
- Hosting
- Cloud Functions
- ML Kit
- Cloud Firestore
- Realtime Database
- Cloud Storage



Improve app quality

- Crashlytics
- Performance Monitoring
- Test Lab



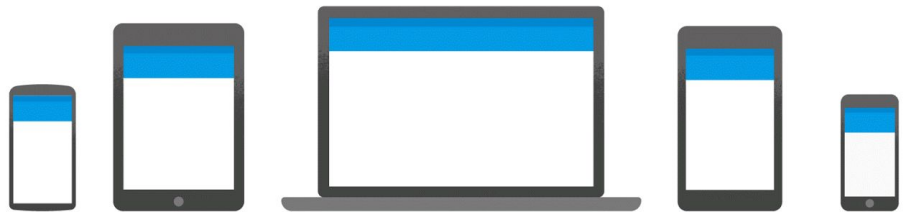
Grow your app

- Analytics
- Remote Config
- Predictions
- A/B Testing
- Cloud Messaging
- Dynamic Links
- In-app Messaging

Firestore Realtime Database



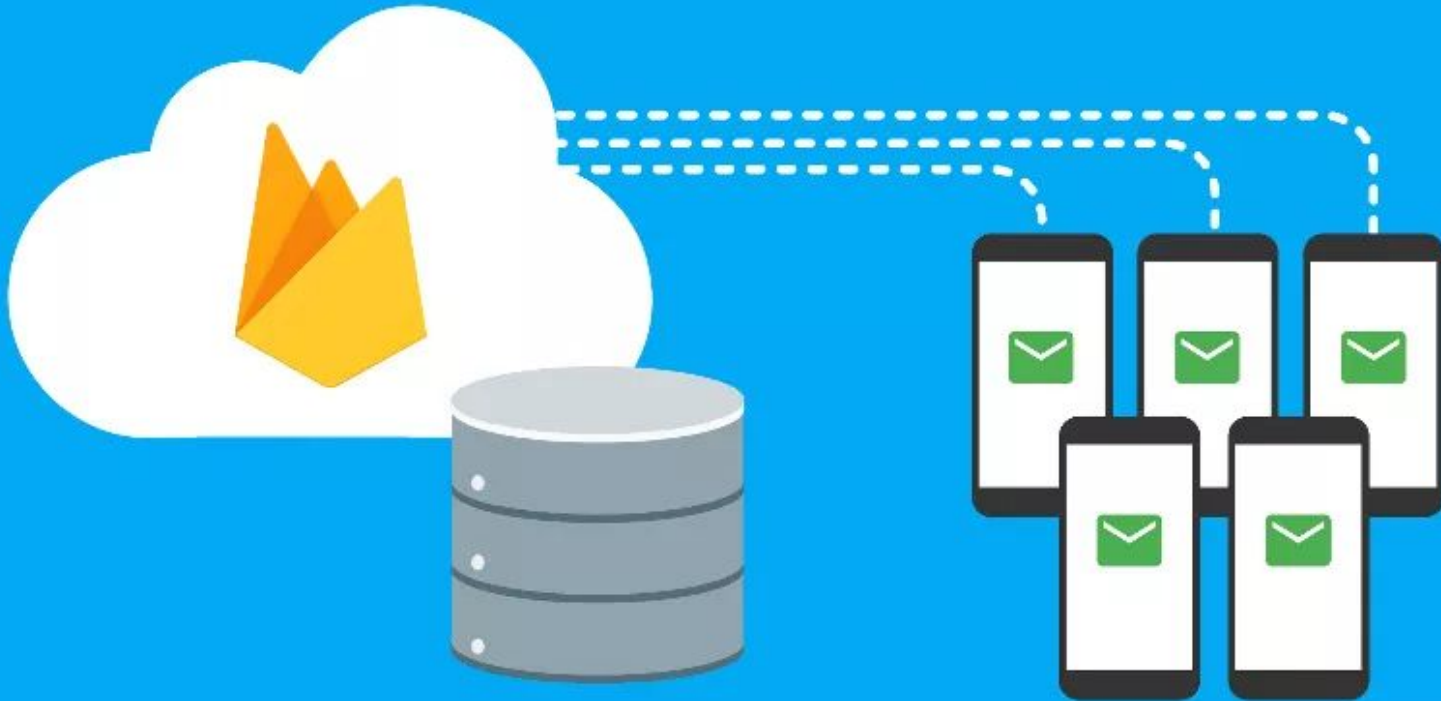
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Firestore Cloud Messaging



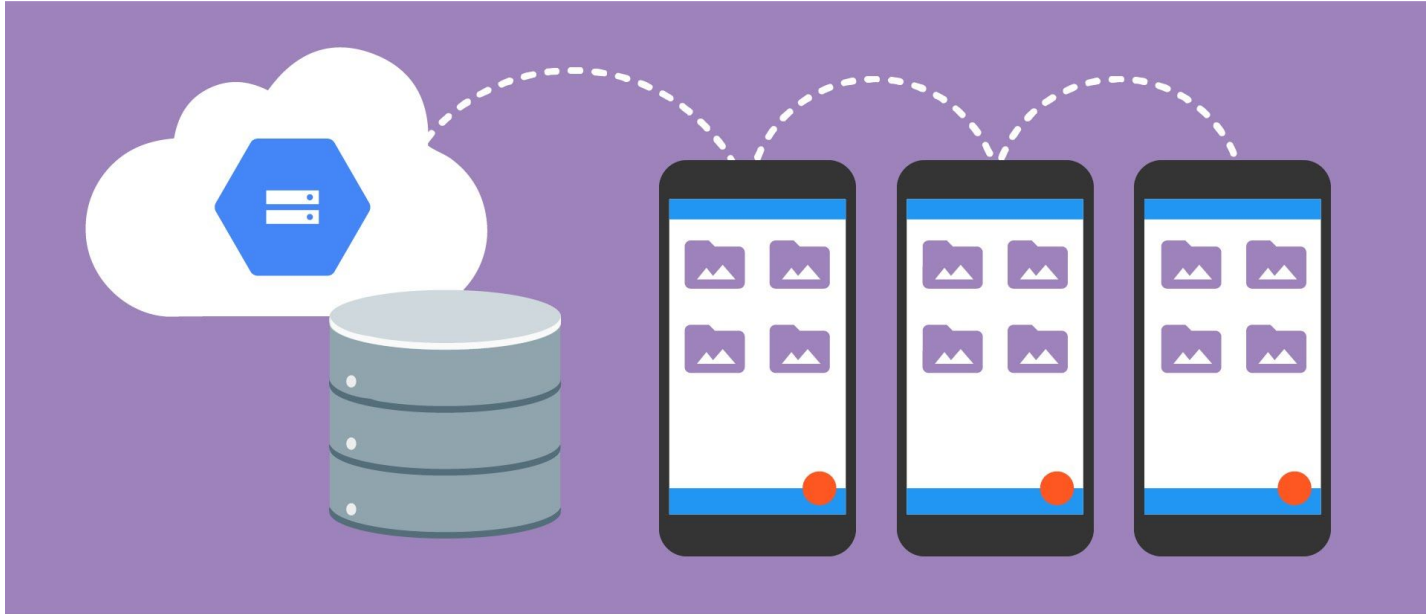
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Firestore Storage

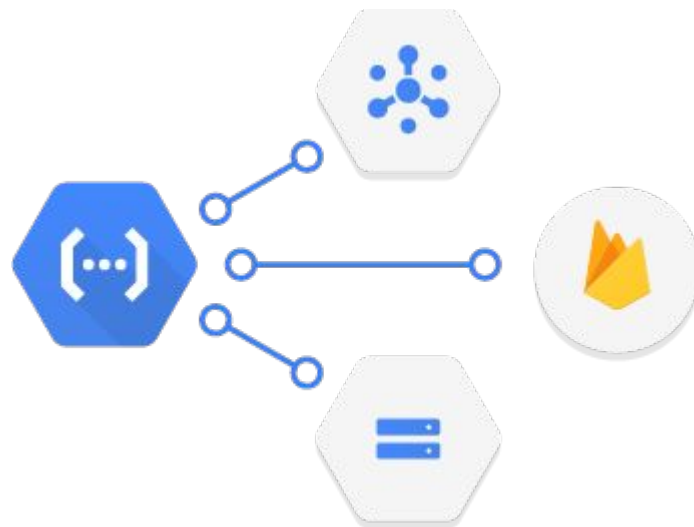
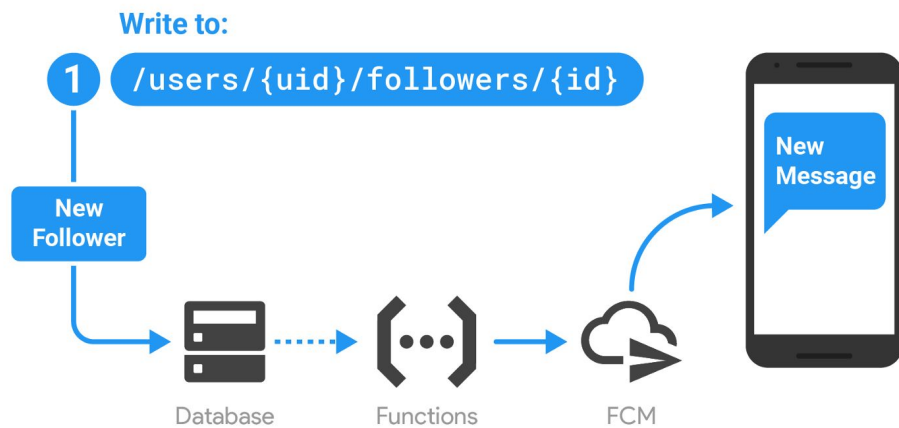


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Storage

Firestore Cloud Functions



Firebase Hosting



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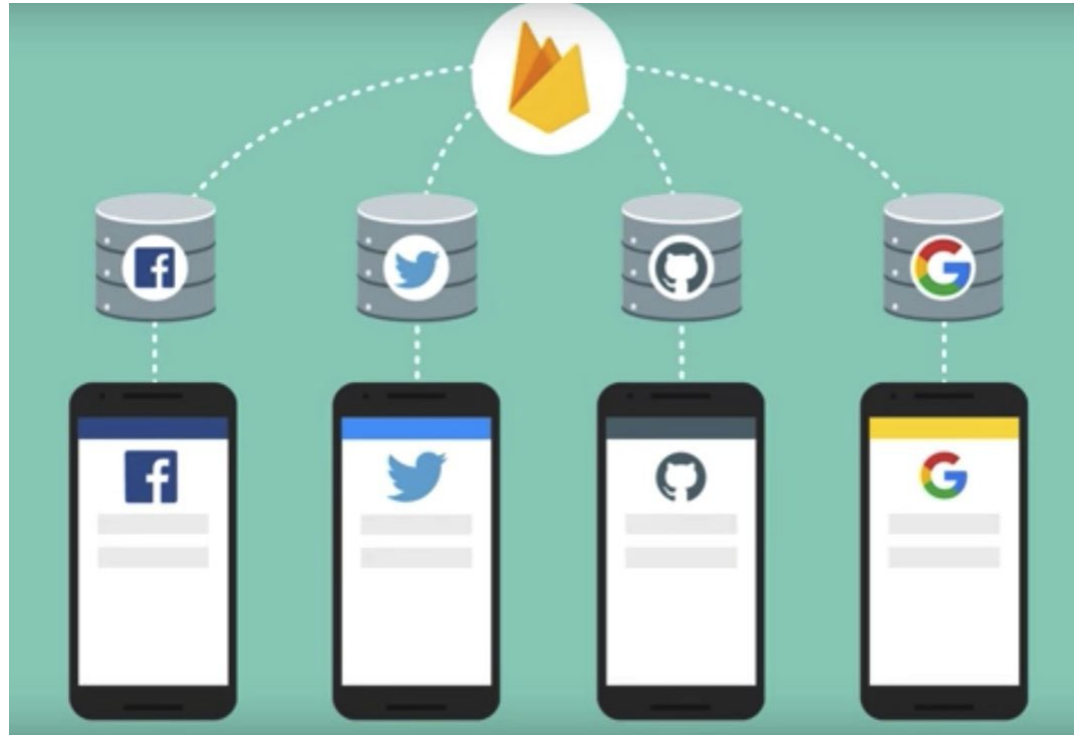


Hosting

Firestore Cloud Functions



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Firebase Machine Learning Kit



The screenshot displays the Firebase ML Kit dashboard. On the left is a dark sidebar with navigation options: Project Overview, DEVELOP (Authentication, Database, Storage, Hosting, Functions, ML Kit), STABILITY (Crashlytics, Performance, Test Lab), and ANALYTICS (Dashboard, Events, Audiences, Attribution). The main content area is titled 'ML Kit' and has tabs for 'APIS' and 'CUSTOM'. A dropdown menu is set to 'Cloud and on-device processing'. Five service cards are visible, each with an icon, title, description, and a 'GET STARTED' link:

- Text recognition**: Recognize and extract text from images.
- Face detection**: Detect faces and facial landmarks.
- Barcode scanning**: Scan and process barcodes.
- Image labeling**: Identify objects, locations, activities, animal species, products, and more.
- Landmark recognition**: Identify popular landmarks in an image.

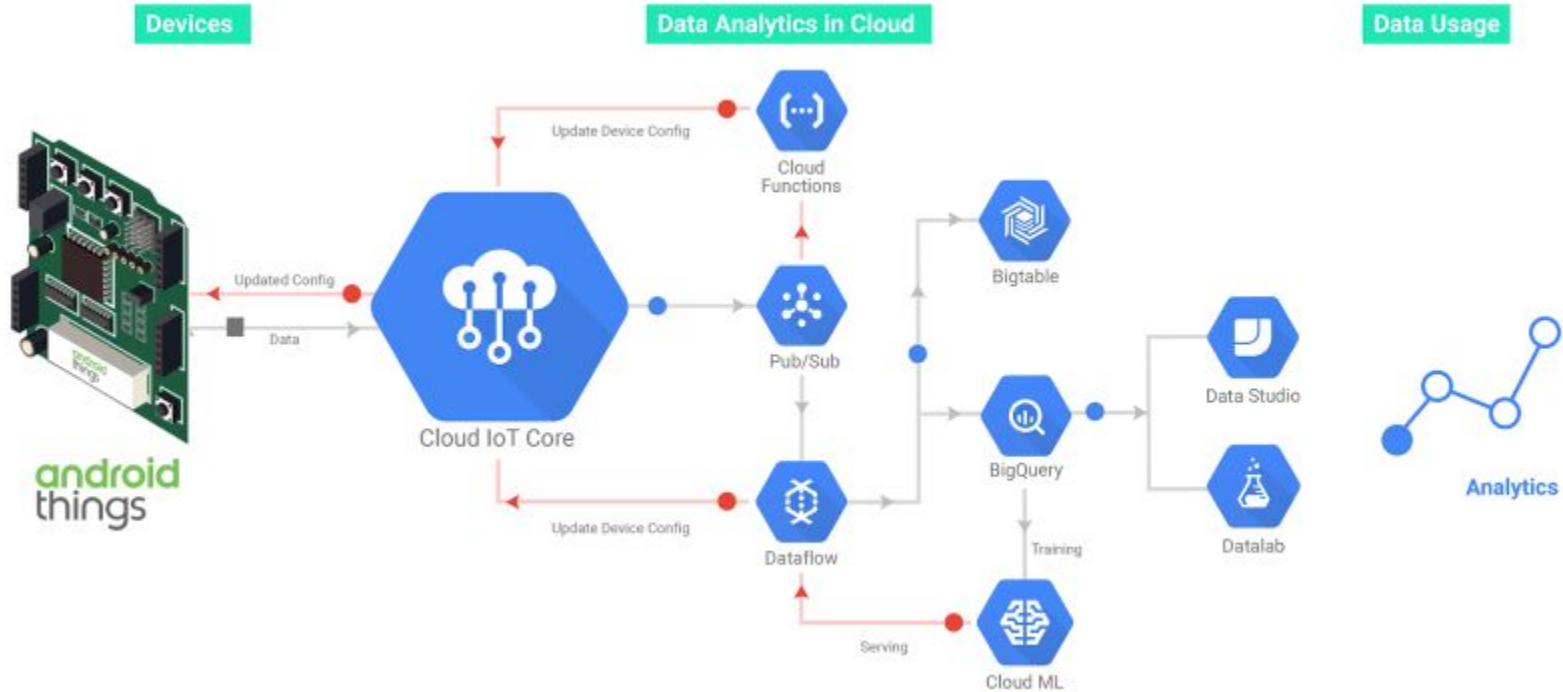
Additional UI elements include a 'View Cloud API usage' link and a help icon in the top right corner.

Android Things



- Android Things - Para System on Modules (SoM)
 - Firebase Authentication
 - Firebase Cloud Messaging (FCM)
 - Firebase Crashlytics
 - Firebase Realtime Database
 - Firebase Remote Config
 - Firebase Storage

Things e Cloud IoT Core



Android Things



- Android Things - Para System on Modules (SoM)
 - Tensor Flow Light
 - Machine Learning



Hub de Serviços

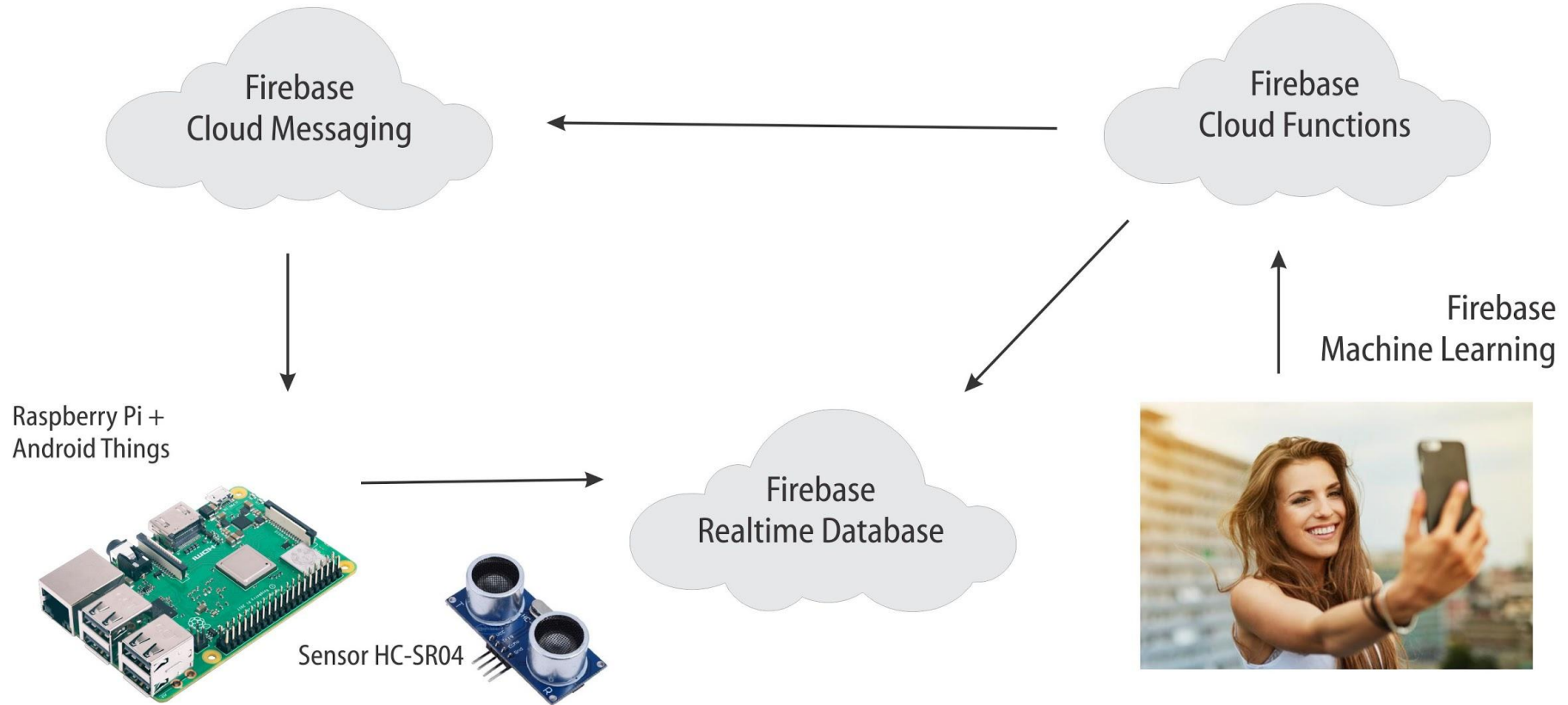


- Dialog Flow
- Conversação. Saída de uma conversa pode ser encaminhada para o Firebase Cloud Functions

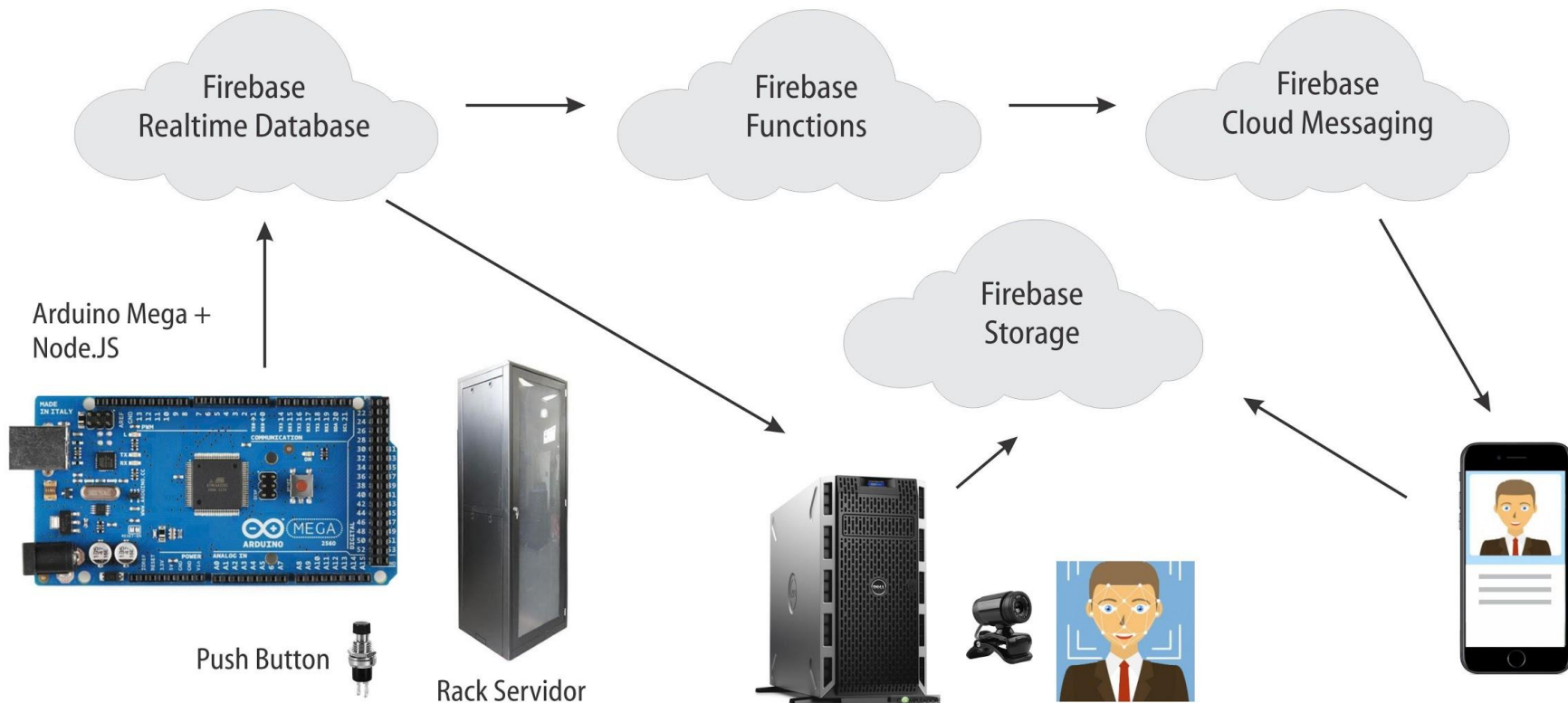


Dialogflow

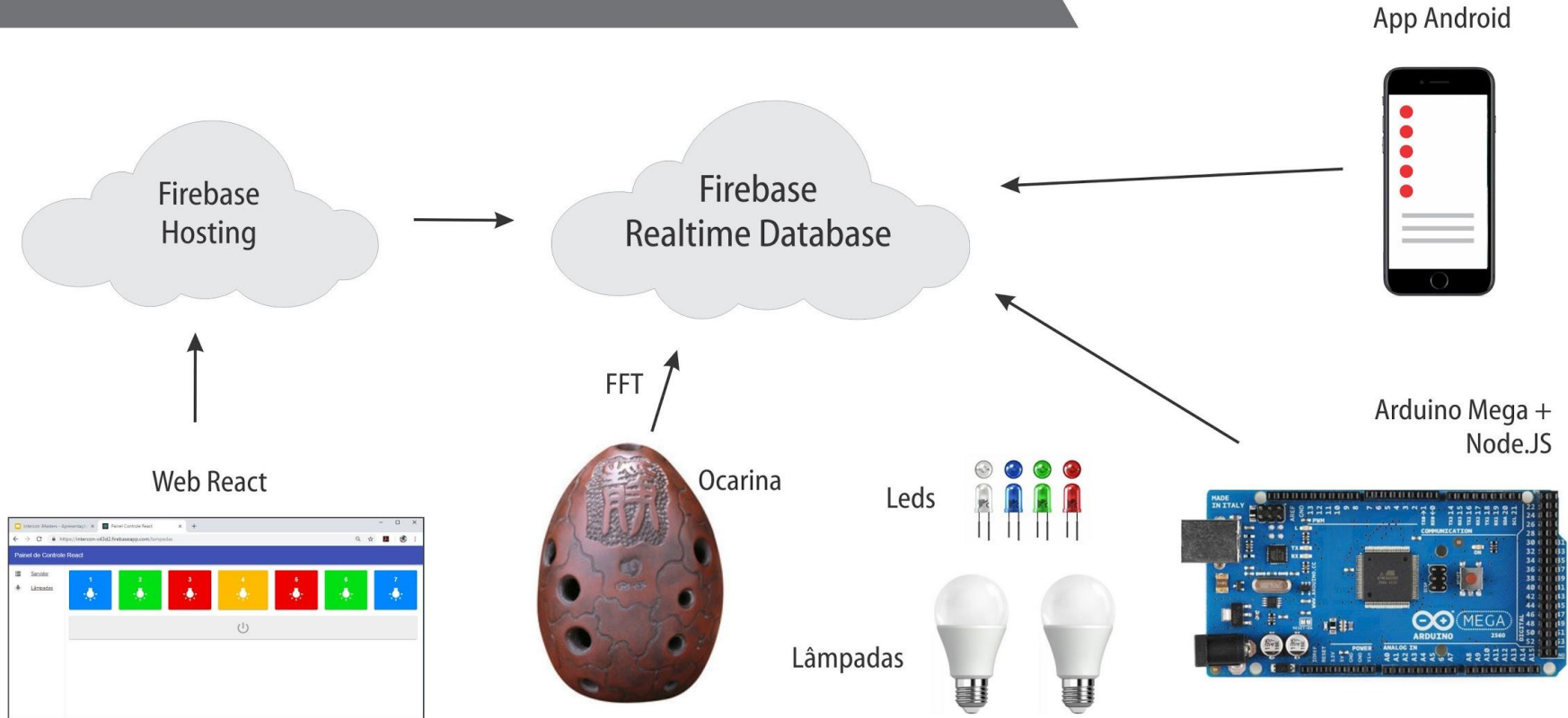
Case 1: Alarme quando abrirem a porta da sala.



Case 2: Alerta e foto quando o rack do servidor for aberto.



Case 3: Ocarina controlando leds e lâmpadas.





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Perguntas???

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