



FCM : Firebase Cloud Messaging

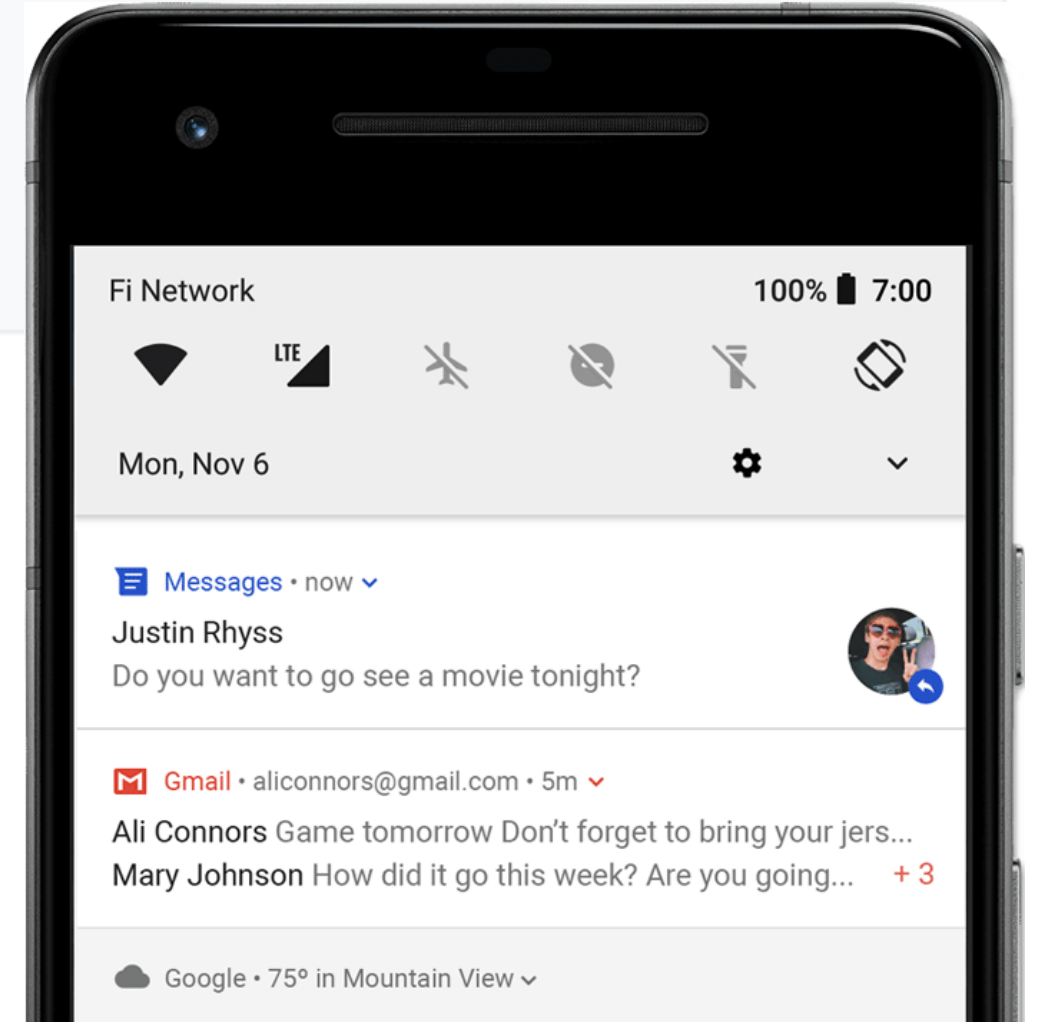
CAF Study Week2

푸시알림 어떻게 띄울까?



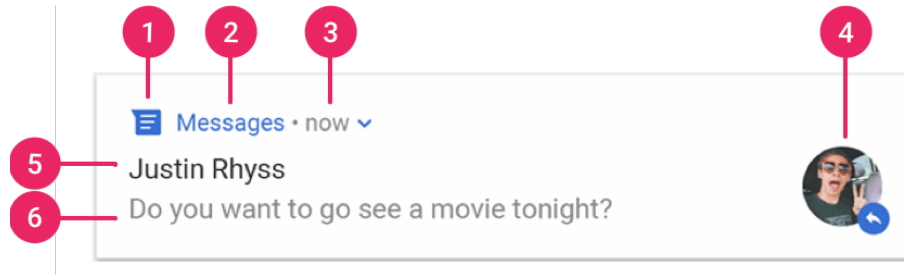
```
Notification noti = new Notification.Builder(mContext)
    .setContentTitle("New mail from " + sender.toString())
    .setContentText(subject)
    .setSmallIcon(R.drawable.new_mail)
    .setLargeIcon(aBitmap)
    .build();
```

Android에서 알림을 만들어주는 친구가 바로 **Notification.Builder**다!
(MainActivity에서 저 코드 쓰면 서버 없이도 푸시알림을 만들 수 있다는 말)

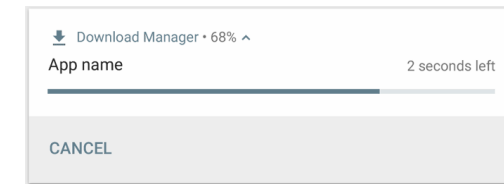
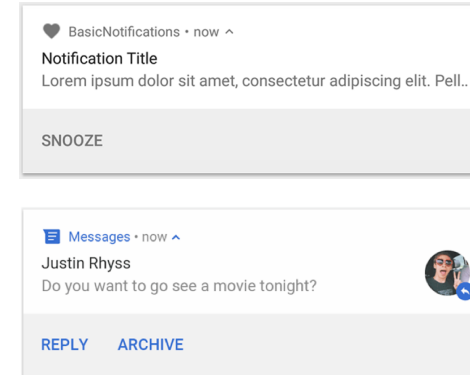
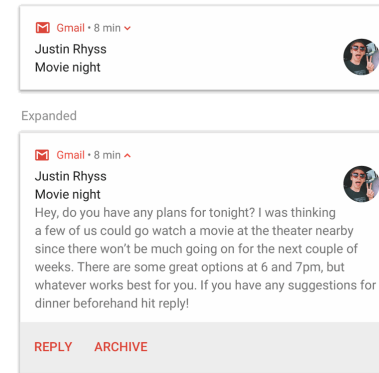


푸시알림 어떻게 띄울까?

1. 알림 기본형



2. 알림 확장형



3. Notification Builder 의 메소드들

- 1 작은 아이콘: 필수 구성요소이며 `setSmallIcon()` 을 통해 설정됩니다.
- 2 앱 이름: 시스템에서 제공합니다.
- 3 타임스탬프: 시스템에서 제공하지만 `setWhen()` 을 사용하여 재정의하거나 `setShowWhen(false)` 로 숨길 수 있습니다.
- 4 큰 아이콘: 선택사항이며(일반적으로 연락처 사진에만 사용되며 앱 아이콘에 사용하지 않음) `setLargeIcon()` 을 통해 설정됩니다.
- 5 제목: 선택사항이며 `setContentTitle()` 을 통해 설정됩니다.
- 6 텍스트: 선택사항이며 `setContentText()` 를 통해 설정됩니다.

그래서 FCM이 뭐죠..?

1. Introduction

Firebase Cloud Messaging (FCM) is a cross-platform messaging solution that lets you reliably **send messages** at no cost. Using FCM, you can **notify a client app** that new email or other data is available to sync. You can **send notification messages** to drive user re-engagement and retention.

2. Key Capabilities

[1] Send notification messages or data messages

Send **notification messages** that are displayed to your user. Or send **data messages** and determine completely what happens in your application code.

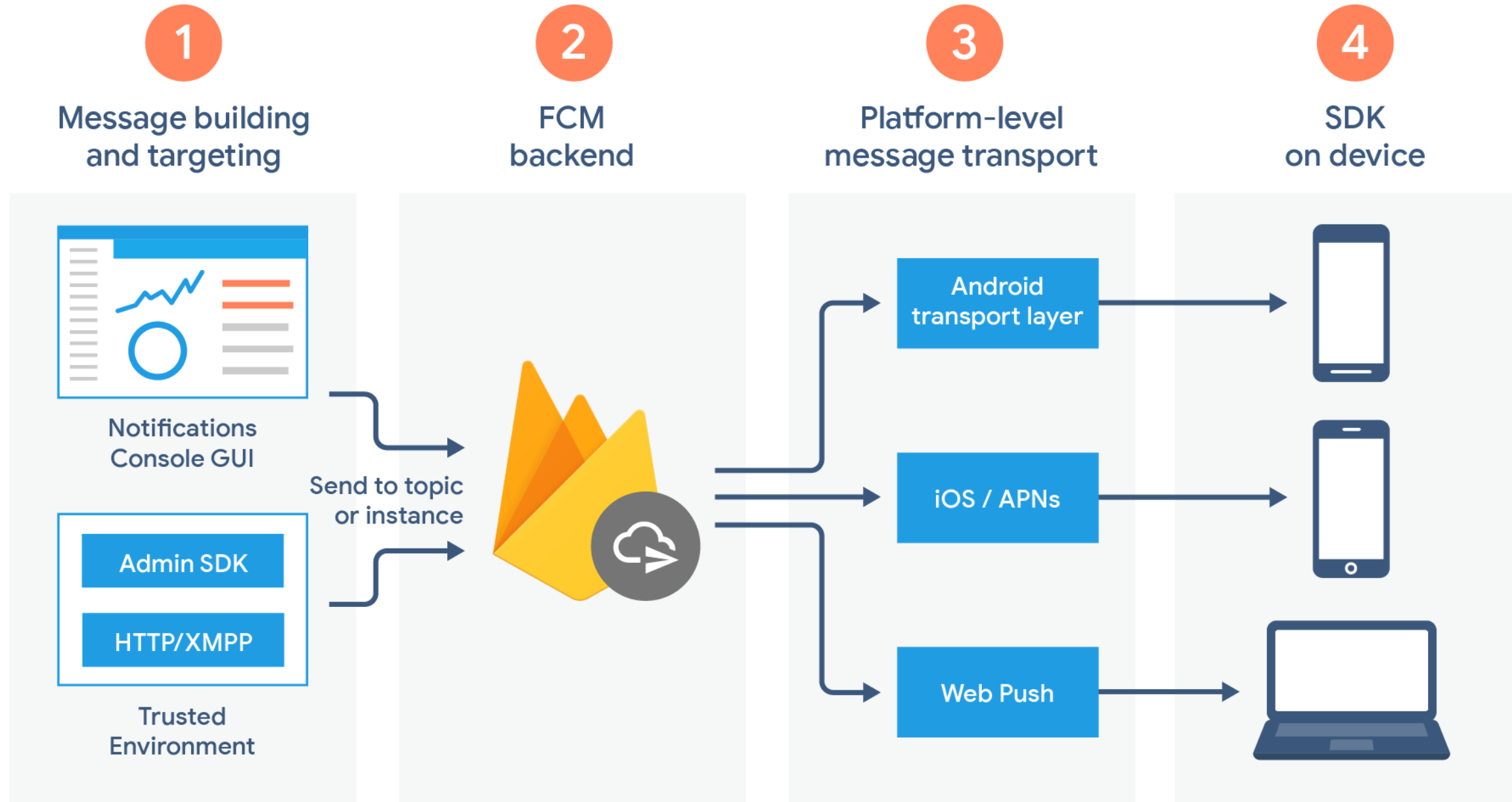
[2] Versatile message targeting

Distribute messages to your client app in any of 3 ways—to single devices, to groups of devices, or to devices subscribed to topics.

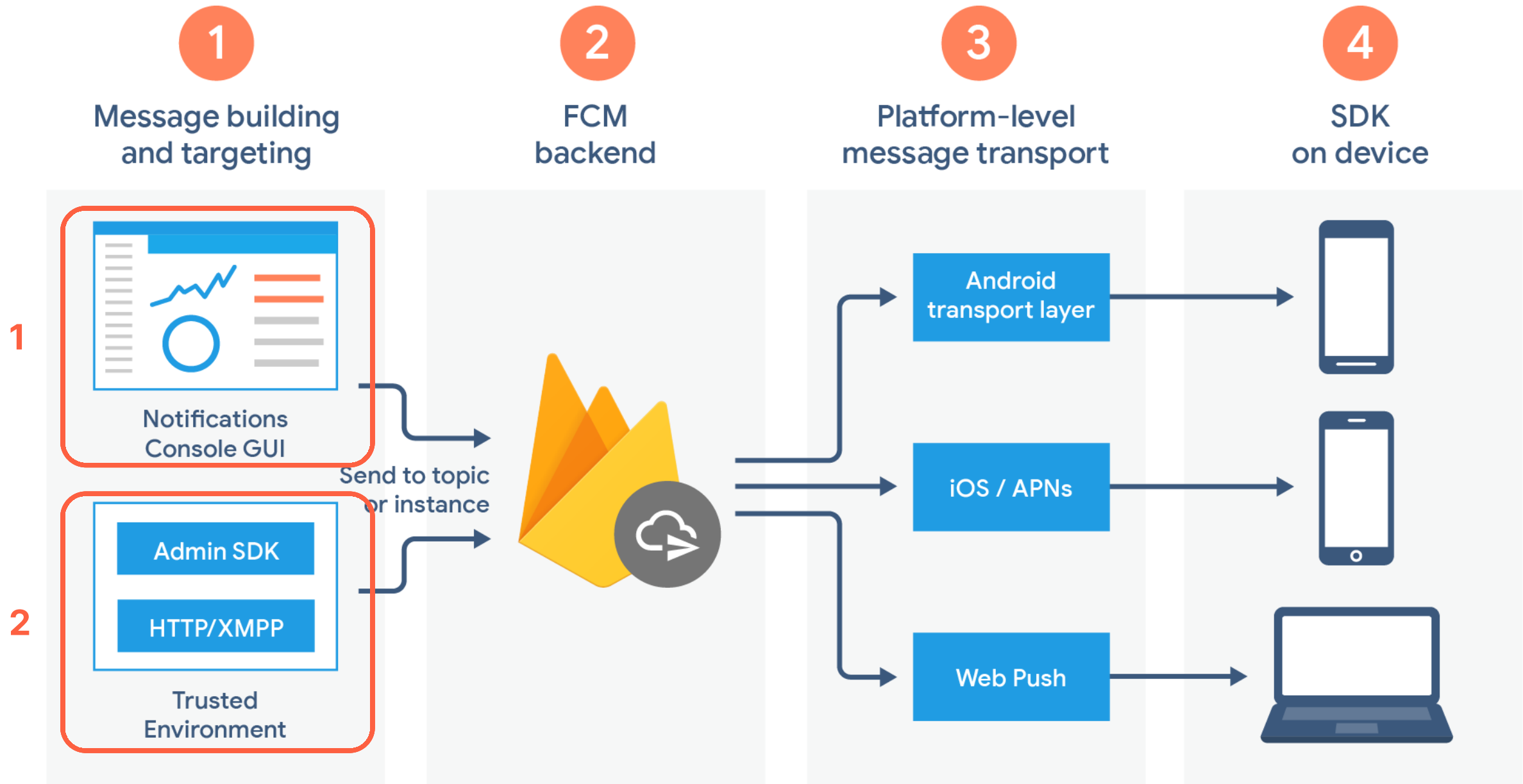
[3] Send messages from client apps

Send acknowledgments, chats, and other messages **from devices back to your server** over FCM's reliable and battery-efficient connection channel.

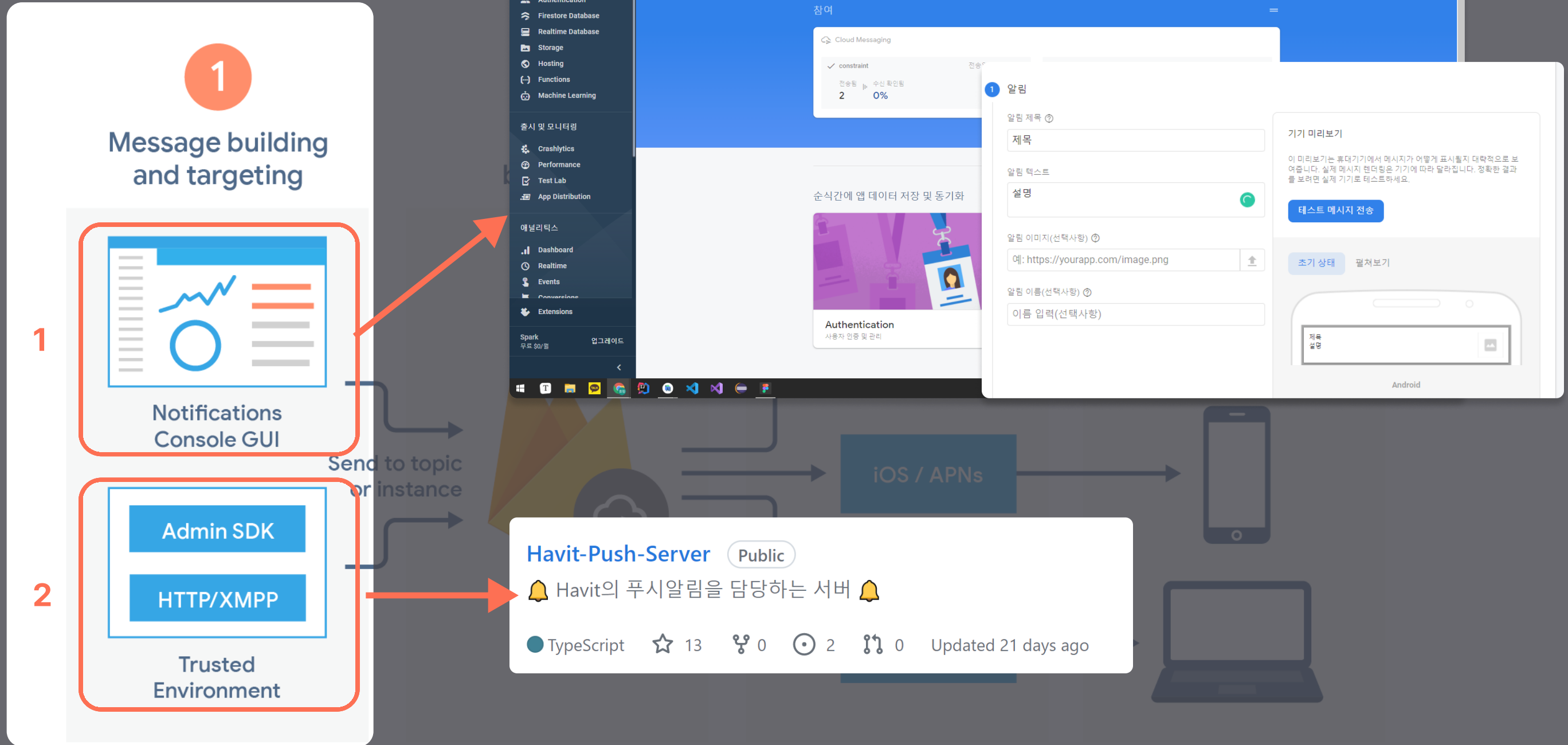
FCM Architectural Overview



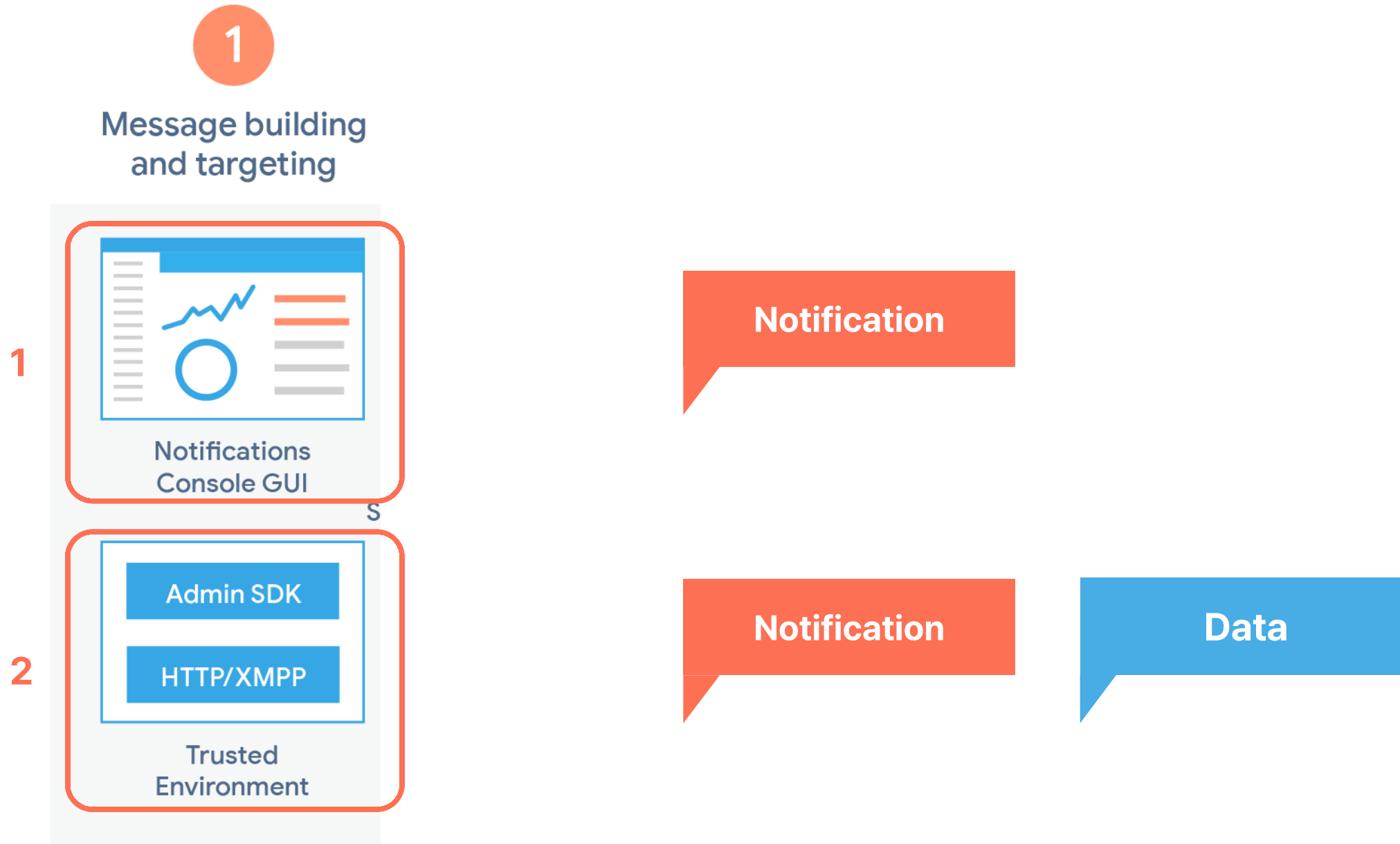
FCM Architectural Overview



FCM Architectural Overview



Message를 보내는 2가지 방법

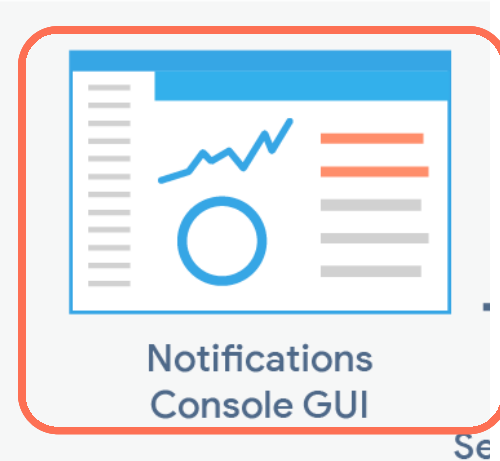


Message를 보내는 2가지 방법

1

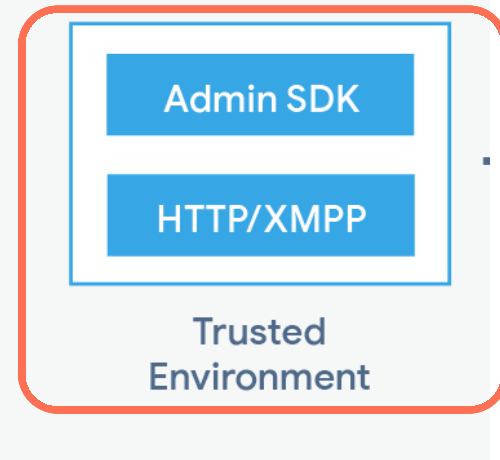
Message building and targeting

1



Se

2



2. Key Capabilities

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Notification

Notification

Data

Notification과 Data Json 형식

With FCM, you can send **two types of messages** to clients:

Json 형식을 사용하여 통신함

Notification

```
{
  "message": {
    "token": "bk3RNwTe3H0:CI2k_HHwgIpoDK",
    "notification": {
      "title": "Portugal vs. Denmark",
      "body": "great match!"
    }
  }
}
```

Data

```
{
  "message": {
    "token": "bk3RNwTe3H0:CI2k_HHwgIpoDK",
    "data": {
      "Nick": "Mario",
      "body": "great match!",
      "Room": "PortugalVSDenmark"
    }
  }
}
```

Noti + Data

```
"message": {
  "token": "bk3RNwTe3H0:CI2k_HHwgIpoDK",
  "notification": {
    "title": "Portugal vs. Denmark",
    "body": "great match!"
  },
  "data": {
    "Nick": "Mario",
    "Room": "PortugalVSDenmark"
  }
}
```

Data 형식을 사용할 땐 다음 예약어를 사용하지 않아야함
"from", "notification," "message_type", or any word
starting with "google" or "gcm."

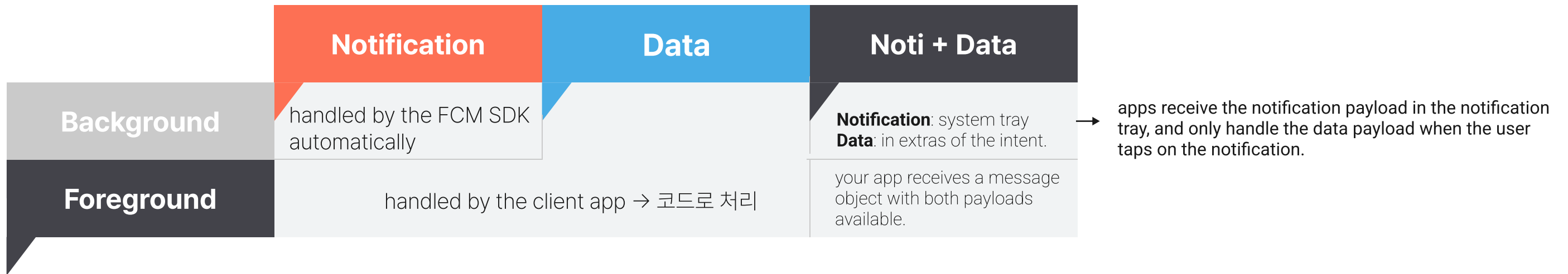
Notification과 Data Json 형식

With FCM, you can send **two types of messages** to clients:

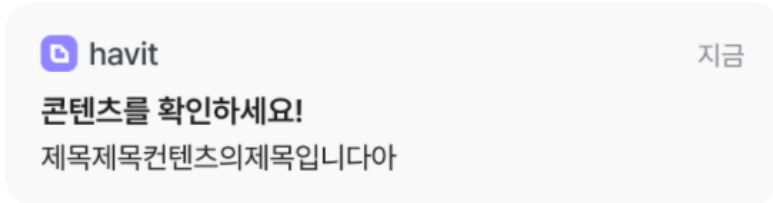
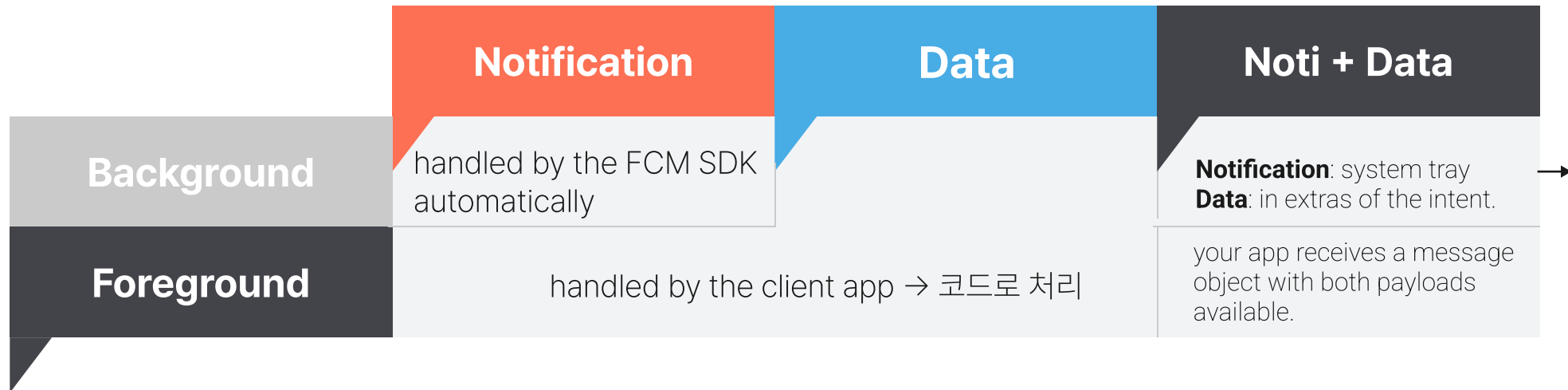
Notification messages, sometimes thought of as "display messages." These are handled by the FCM SDK automatically.

Data messages, which are handled by the client app.

Background : 앱이 실행조차 안 되어 있는 상황이거나 다른 앱이 가장 위에서 실행되고 있는 상황. (+ 화면 오래 터치 안해서 어두워져 있는 상황..?)



서버로부터 알림을 받을 준비



FCM data

Key	Value	Type
title	Havit 자체 랜덤 타이틀	string
body	컨텐츠 타이틀	string
image	컨텐츠 이미지	string
url	컨텐츠 링크	string

+ 새로 만들기

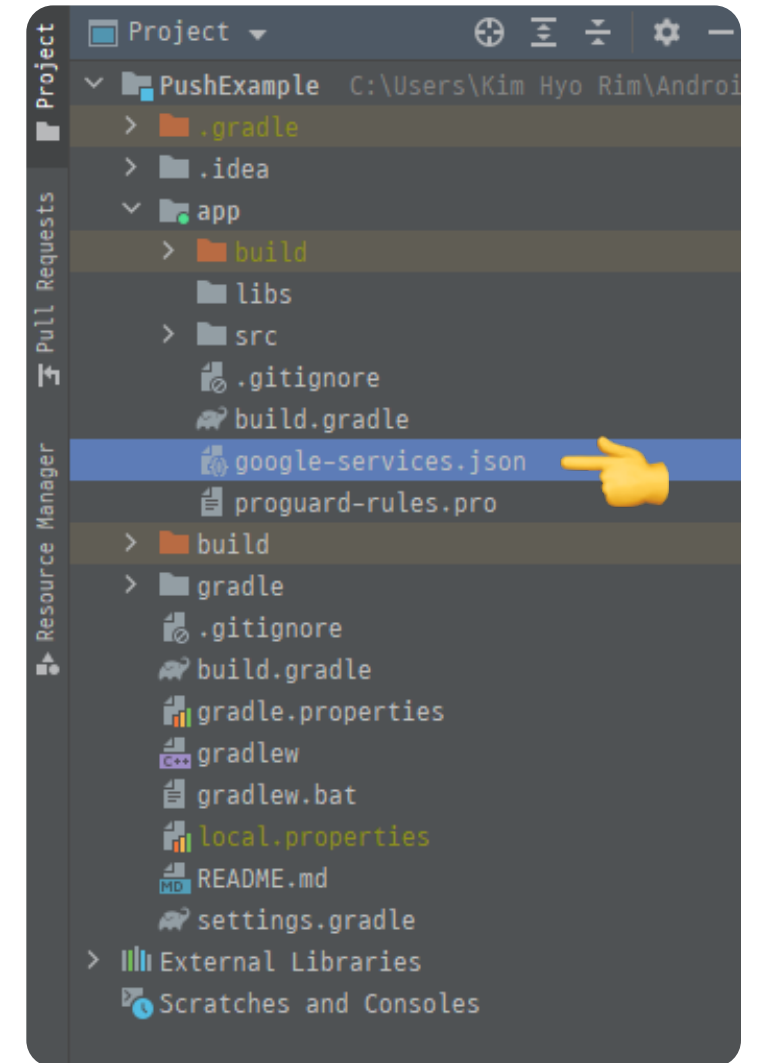
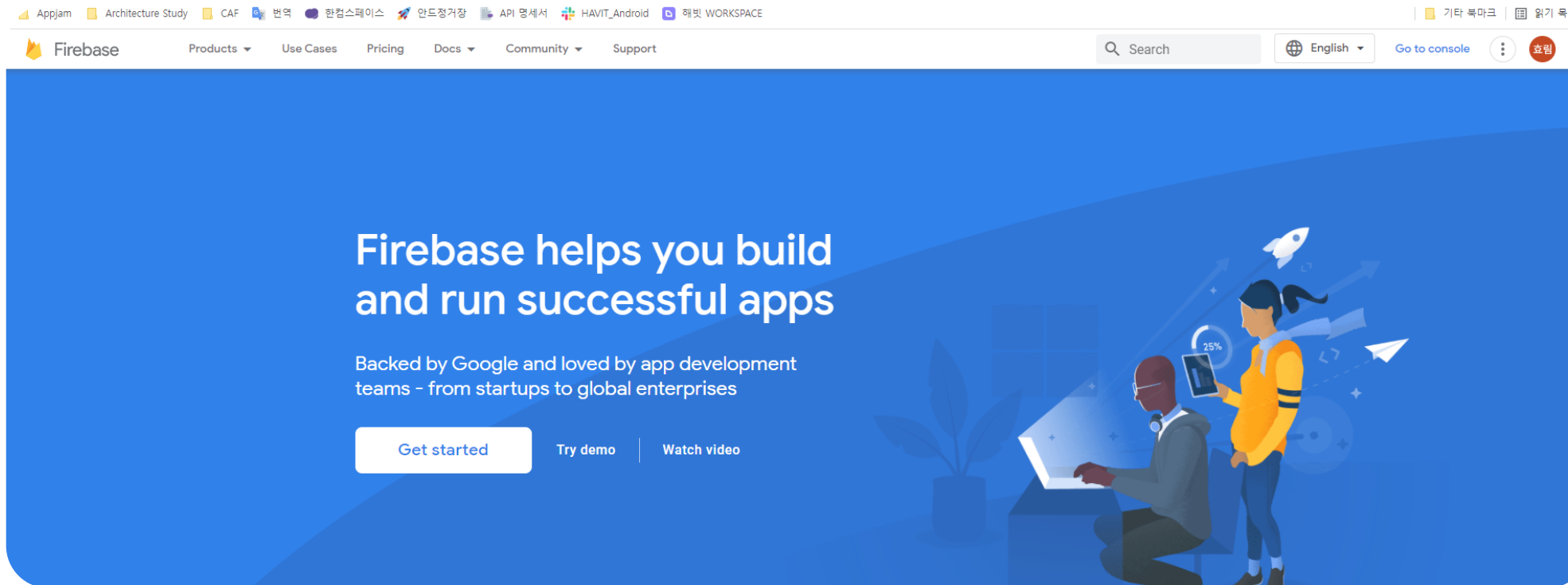
```
data: {  
  title: randomTitle as string,  
  body: reminder.ogTitle as string,  
  image: reminder.ogImage as string,  
  url: reminder.url as string,  
}
```

서버 : 그럼 Data로 푸시 보낼게?
나 : ㅇㅋㅇㅋ

서버 : 효림아 테스트 하게 Device Token 좀 줘바
나 : ???

서버로부터 알림을 받을 준비

1. 각자 안드로이드 스튜디오에 프로젝트 하나씩 만들기 (package name)
2. firebase.google.com 에 접속합니다
3. 아래에 있는 GetStarted 클릭



서버로부터 알림을 받을 준비

프로젝트 수준의 `build.gradle` (<project>/build.gradle):

```
buildscript {
    repositories {
        // Check that you have the following line (if not, add it):
        google() // Google's Maven repository
    }
    dependencies {
        ...
        // Add this line
        classpath 'com.google.gms:google-services:4.3.10'
    }
}

allprojects {
    ...
    repositories {
        // Check that you have the following line (if not, add it):
        google() // Google's Maven repository
        ...
    }
}
```



서버로부터 알림을 받을 준비

앱 수준의 `build.gradle` (<project>/<app-module>/build.gradle):

```
apply plugin: 'com.android.application'
// Add this line
apply plugin: 'com.google.gms.google-services'

dependencies {
    // Import the Firebase BoM
    implementation platform('com.google.firebase:firebase-bom:29.1.0')

    // Add the dependency for the Firebase SDK for Google Analytics
    // When using the BoM, don't specify versions in Firebase dependencies
    implementation 'com.google.firebase:firebase-analytics-ktx'

    // Add the dependencies for any other desired Firebase products
    // https://firebase.google.com/docs/android/setup#available-libraries
}
```