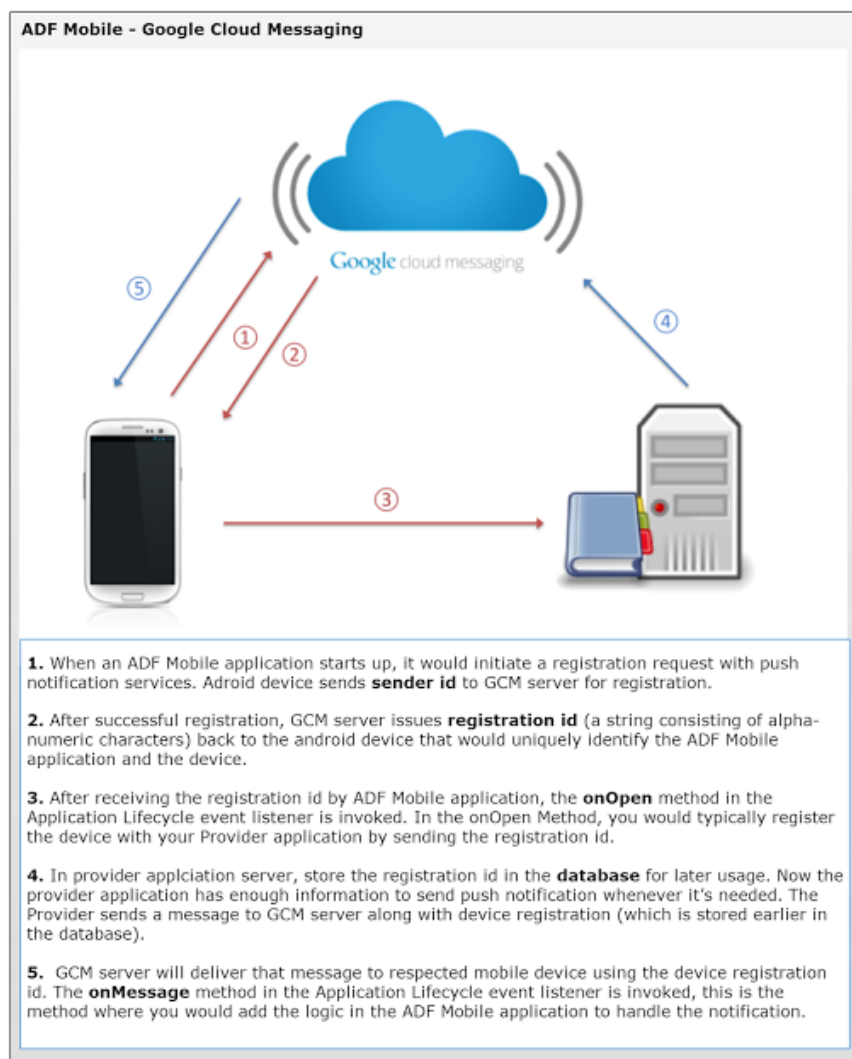# Goal

The purpose of the GCMPushBranch is to implement server side push notifications to android devices.

Details

Technologies Used

Google Cloud Messaging (GCM) for Android is a free service that helps developers send data from servers to their Android applications on Android devices, and upstream messages from the user's device back to the cloud.

What we have achieved in the above steps

Step 1: We are able to successfully initiate a registration request with GCM server using the google project sender ID.
Step 2: After successful registration, the GCM server sends a registration ID to the android device.
Step 3: The android device can send the registration ID to the DreamFactory server and is now listening for notifications from GCM.
Step 4: DreamFactory server stores the registration ID in the database for later use. The DreamFactory has enough information to push notifications whenever its needed. We can successfully manually trigger these push notifications to GCM server which is then able to transmit to these messages to the android client. To do this in an automated way, a cron job is required. The issue is that the current version of DreamFactory does not support cron jobs. However, the next version of DreamFactory which is not yet out is supposed to be able to support cron jobs. As a work around, another 3rd party server can be used to run this cron job which can trigger the server side scripts I have created on DreamFactory. To expand on these server side scripts, I have created event scripts and custom scripts on DreamFactory servers to send the push notification to the GCM server (the DreamFactory instance creates eventScript and customScript). The customScript I used is test-include6.js. This custom script is invoked by an eventScript. I created an eventScript for /db/device for the db.device.get.post_process event. This eventScript is triggered by an http GET to the device db table on DreamFactory. The automated script needs to periodically do a GET on the device table to send the notification.

I created a Google API Project account using Google Developers Console.
Google account: seniorpandadev@gmail.com with password Dukecs408.
Project name: "SeniorPanda."
Project ID: lofty-object-777.
Project number is 344666265827. This project number is used as the GCM sender ID for device registration with GCM server.
I also obtained an API authentication key (called authorization by DreamFactory and listed next to authorization below) from the Google Developers Console. This is used in the DreamFactory remote web service.

DreamFactory Server Setup
Created a 'remote web service' on DF called "seniorpandagcm"
BaseUrl: https://android.googleapis.com/gcm/send
Authorization: key=AIzaSyAocIWC8OXF1uTJ0xFgVTrrBH_Mh_17Peg