

Proxy and Application Layer

Android Push Notifications

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Android Push Notifications

- Android Cloud to Device Messaging Framework
- Polling
- SMS
- Persistent TCP/IP

Android Push Notifications

- C2DM
 - Send data from servers to application on Android device.
 - Requires Google Account
 - No guarantee about delivery
 - Simply passes message raw
 - Application must be Market installed
 - Application must have Application Server described by Role
 - Android \geq 2.2

Android Push Notifications

- C2DM
 - You must have an HTTPS application server:
 - Able to communicate with your client.
 - Able to fire off HTTP requests to the C2DM server.
 - Able to handle requests and queue data as needed. For example, it should be able to perform exponential back off.
 - Able to store the ClientLogin Auth token and client registration IDs. The server should store the token and have a policy to refresh it periodically.

Android Push Notifications

- Polling

- Advantages: easy to implement. no cost solution
- Disadvantages: Obviously, you will never be actually real-time. If you polling interval is 30 min, you can get a message that is 29 minutes and 59 seconds late. Moreover, polling more often than every 15-30 min will kill your battery pretty quickly:

<https://labs.ericsson.com/apis/mobile-java-push/bl>

Android Push Notifications

- SMS
 - Advantages: easy to implement. Fully real-time updates. Known drop-in solutions exist such as one provided by Ericsson Labs:
<https://labs.ericsson.com/apis/mobile-java-push/>
 - Disadvantages: Can be costly to you and the user. If you want to have a reliable SMS-based service that is available worldwide, you will likely need to pay. Similar goes for the users.

Android Push Notifications

- Persistent TCP/IP
 - Advantages: Fully real-time updates.
 - Disadvantages: Hard to implement a reliable service on both the phone and the server side. The Android OS is known to be able to kill services when it's running low on memory, so your notifications service can easily disappear. What happens when your phone goes to sleep? Some people complain about battery life issues related to maintaining an active connection.

Proxy

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