

Dependencies

- Bouncy castle
- Android SDK
- Android SDK targets
- Android SMS/MMS/Google Voice Sending Library by Jacob Klinker
- Java 7 SE development environment for application, Java 8 SE development environment for server
- A (virtual) Android device

Android API levels:

When we began the project we used the highest available API at that time as target, which was “Android L”. Later in the course we changed target to 21 as it just came out. Later on we lowered this level to 19 to enable some of the group members to run the app on their phones.

- Target API : 21
- Minimum API: 19

Structure

We have divided the structure of the app by frontend, backend and server.

Protocol (client / server)

The server is accessed by the client by two sockets. When the socket is opened, the java Socket object provides an input and an output stream which are then used to communicate with the server. Both symmetric (AES) and asymmetric (RSA) encryption are used to encrypt the communication. The data is encrypted using an arbitrarily generated AES key which along with its instantiation vector is encrypted using RSA and transmitted together with the encrypted data.