

Chapter 4

Implementation

In this section I will discuss the technical details involved in producing the algorithm and StegChat test application. A structure diagram showing the classes used during key processes can be found as Appendix B (This diagram does not contain every single class. Exceptions include object classes which are explained in sufficient detail).

4.1 Platform

The Google App Engine [10] was chosen as the platform on which to develop the application. The App Engine is Google's cloud-based application hosting service. There were a number of reasons why this was chosen. The primary reason is that Java is the authors first language, and it is one of the App Engine's three supported languages (the others being Python and Go). It also provides access to the High-Replication Datastore, a database-like service which has very fast access and promises no data loss (due to the high replication aspect). Another (and perhaps most important) reason why it was chosen as for small usage applications it is completely free (which is ideal for development). It does, however, have a few limitations:

- One minute request time - All requests have a limit of one minute for them to be returned. This means that any processing must take under one minute, and so long sections of text can not be processed (although in the case of a chat application this is not an issue).
- No support for outgoing TCP connections - This limits the ability of any application to connect to external servers using TCP. In the sense of a chat application, this means that the use of an external XMPP service (such as Facebook Chat) is limited. The overcoming of this issue is discussed later in this chapter.