XMPP Server Project

Milestone 1 Report

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A. Introduction

These days, Instant Messaging plays an important role in people's life, both personal and professional. Specially in business, availability and low cost of the servers is an important factor in IM servers. Being able to interoperable with other companies' server is also a preferred feature. Studying and implementing some possibilities to this problem is the aim of this project.

Three versions of the server and two of the client were developed. In the client the difference between the two was the protocol used: UDP versus TCP while the server had two TCP implementations: one using several threads for each connection, and other using only one with non-blocking sockets.

The server was implemented on the Java Virtual Machine, since one of the requirements was using JavaNIO for non-blocking sockets. The language of choice was Scala due to its hybrid Object-Oriented and Functional nature along with its natural XML native type. As for the server, same language was chosen, since much of the code was the same as the server.

B. Internal architecture of the server

B1. Common Architecture

The server is composed by two layers: The communication layer, and the processing layer. The first one differs in the three versions of the server that will be detailed below. The second one is responsible for parsing the request