Distributed Computing over the Internet
Project Proposal

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Paper Selection

The paper I selected is *The State of the Art in Locally Distributed Web-Server Systems* by V.Cardellini et al. In the paper, the author discusses various strategies for the growing web traffic and increased complexity of web requests. The problem can be solved from different aspects such as server architecture design, load sharing and effective dispatching algorithms, applying advanced routing mechanism, etc.

Project Proposal

Comparing to the traditional way of implementation using pthread, actor model has a more elegant solution for concurrency. The actor model also has advantage in scalability.

The theme of this project is to use actor model to implement a simple distributed application layer to handle web requests, including basic HTTP requests, database query, encryption/decryption etc. Different kind of job will be handled by different type of actors. There are also communication actors that transfer message between users and various worker actors. Using DNS server[Part 1.2 of the paper], we can bind one website name(www.example.com) into several IP addresses and let one communication actors to listen to these addresses one by one.