Distributed Intelligent Agent

1. Requirements

Build a distributed web server. This web server can contains multiple host servers. Each server can holds several agents. Each agent can handle the client requests for specific ports. These agents can be assigned to different groups. The agents within the same group can share their data and state. They may also be able to communicate with each other. Moreover, there is an independent name server, which maintains the entire status of this web server, including the host server, agents, and there states.

[system diagram]

1. Detailed Requirement Specification
   1. Name Server
2. Name server shall be started up before other host server and agents.
3. Name server monitors two channels: one is for handling the request from client browser which asking for the latest state of the DIA server; another is for processing the communication from other host server or agents.
4. Use producer and consumer design pattern to register the new agent to name server.
5. Use Queue to generate
   1. Host Server
   2. Agent

* Name Server
* Host Server
* Agent

1. Use Case

[use case diagram]

1. Detail Design