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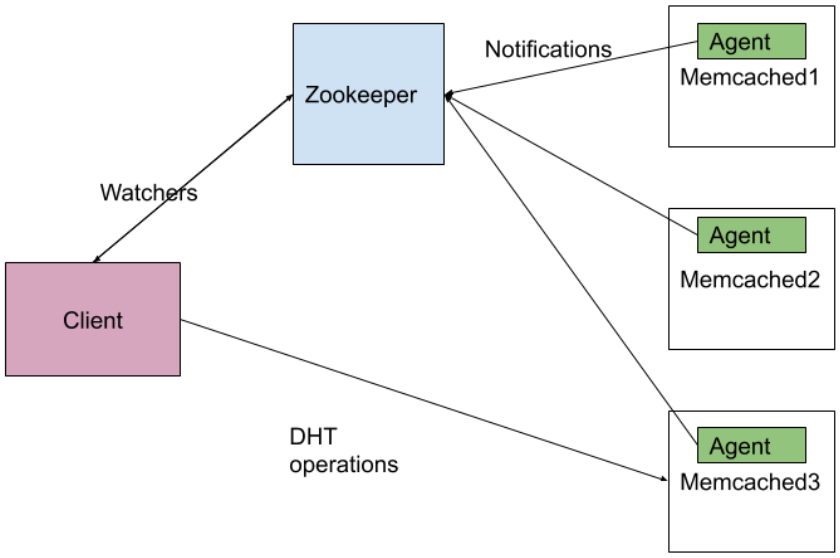
The watchdog and Zookeeper client are both written in NodeJS.



Zookeeper has 2 znodes: all_nodes and live_nodes.
The agent runs on the memcached servers and watches the memcached service. When the service goes down, in case of network connectivity lost or in case of agent failure, it notifies Zookeeper by writing or removing data from /live_nodes. When the agent starts, the server is registered under all_nodes.

Client adds watchers to all_nodes and live_nodes and updates its internal data structures accordingly. Command data is read from a file called ‘input’.
The server assignment is done by hashing the IP:Port value, truncating it to a 4 digit number and computing the modulus of the number of live nodes. The get operation is executed in at most O(N), where N is the number of memcached servers.

How to run:
Start memcached(port 11211), zookeeper (port 2181).
Run ‘sudo node watchdog.js [MEMCACHED_SERVER_NAME] [IP:PORT]’. Sudo is required because it watches certain processes that need elevated privileges.
Run ‘node zookeeper.js’
! Stop the memcached servers with systemctl !