

PROGRAM 4 - DISTRIBUTED FILESYSTEM

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In this project we have tried to implement the following enhancements.

1. Failover
2. Availability

The failover mechanism is used to serve the clients even though one of the servers goes down. A master server boots up and starts listening to incoming connections from either clients or other servers. There is a single master and there can be multiple file servers which serve the files. Whenever a server boots up, it registers itself with the master and waits for incoming connection from the clients. The client connects to a master and obtains the server information to connect to. Whenever a server goes down, the client detects this and notifies the master that the server has gone down. The master then provides the client with an alternate server to connect to (assuming that there is more than one server registered to the master).

Whenever a server boots up and registers with the master and if there is another server already registered then the second server synchronizes itself with the other server using rsync. Until the sync is complete, the clients are blocked to maintain consistency.

ASSUMPTIONS

1. The master process never dies.
2. Write/Update consistency may not be provided.
3. Directory structure of all servers is assumed to be the same.