# Scalable Computing

## Distributed File Server

The follow components/services were implemented on my DFS:

* File Server
* Caching
* Replication
* Locking

Tornado was used. This is a ‘scalable, non-blocking web server and web application framework written in Python.’

### Caching

Caching is done on the client. It is only available for 60 seconds.

### Locking

The client checks to see if a file is locked. If it is the following message is sent: 'File is locked – cant open'. If the file is not locked the client opens the file and adds a lock.

### Replication/File Server

A simulation is carried out on the client to “check” if the file server is free, if the file server is not free the client gets the file from the replication server.

FileServerIsFree = random.uniform(0, 1) > 0.2

The replication server copies the files from the following location:

File\_server\_path = 'c:\\DistFileSystem\\Files'

To this location:

File\_server\_path = 'c:\\DistFileSystem\\RepFiles'