SDFS-3 Checkpoint Document

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Thread-Safe Design

Haven’t implemented yet.

Multi-Client Solution

I use three HashMap to store the opened file in the NameNode. When a request asks to open a read only file, it just simply send back the file node and store its token to accordingly HashMap. When a request asks to open a read write file, it will first copy the file node and then send back the copied one and store both of them in two different HashMap, one is called writing node and another is called original node. When the client make some change to the node, it will only modify the writing node and thus cause no side effect on the file tree. When one read write file is closed, it will replace the file node in the file tree with the writing node in the HashMap, which here serves as a cache of the opened file node.

Problems I Met

Some bad designs of the last lab made me spend some time refactoring the project.

Changes of the Test Code

I do not use RMI. So I have to change the test code to match my design. All the changes do not modify the behavior of the test.