

```

public class StorageNode_TCPMonitor {
    int readers = 0;
    int waitingW = 0;
    int waitingR = 0;
    boolean writing = false;
    boolean readersturn = false;

    synchronized void StartRead() {
        while (writing || (waitingW > 0 && !readersturn)) {
            ++waitingR;

            try {
                wait();
            } catch (InterruptedException e) {}

            ;

            --waitingR;
        }

        ++readers;
    }

    synchronized void EndRead() {
        readers = readers - 1;
        readersturn = false;

        if (readers == 0)
            notifyAll();
    }

    synchronized public void StartWrite() {
        while ((readers > 0 || writing) || (waitingR > 0 && readersturn)) {
            ++waitingW;

            try {
                wait();
            } catch (InterruptedException e) {}

            --waitingW;
        }

        writing = true;
    }

    synchronized void EndWrite() {
        writing = false;
        readersturn = true;
        notifyAll();
    }
}

```