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import java.util Random;
import java.net.*;
import java.io.*;

public class LoadBalancer extends Thread {
    static String hosts[] = {"localhost", "localhost"};
    static int ports[] = {8081, 8082};
    static int nbHosts = 2;
    static Random rand = new Random();
    Socket sClient;

    public LoadBalancer(Socket s) {
        this.sClient = s;
    }

    public void run() {
        try {
            System.out.println("Debut Load Blancing");

            // Recuperer la requete du Client
            OutputStream os = sClient.getOutputStream();
            InputStream is = sClient.getInputStream();
            byte[] rq = new byte[1024];
            is.read(rq);

            // Transmettre la requete vers une Comanche
            int i = rand.nextInt(nbHosts);
            Socket sComanche = new Socket(hosts[i], ports[i]);
            OutputStream osc = sComanche.getOutputStream();
            InputStream isc = sComanche.getInputStream();
            osc.write(rq);

            // Recuperer la reponse de la Comanche et la transmettre au client
            byte[] rep = new byte[1024];
            isc.read(rep);
            os.write(rep);

            os.close();
            is.close();
            osc.close();
            isc.close();
            sClient.close();
            sComanche.close();

            System.out.println("Fin Load Blancing");
        } catch (Exception e) {
            e.printStackTrace();
        }
    }

    public static void main(String args[]) {
        try {
            ServerSocket ss = new ServerSocket(8080);
            while (true) {
                Socket s = ss.accept();
                System.out.println("Demande de connection");

                LoadBalancer t = new LoadBalancer(s);
                t.start();
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}

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import java.net.*;
import java.io.*;

public class Comanche implements Runnable {
    private Socket s;
    public Comanche (Socket s) { this.s = s; }

    public static void main (String[] args) throws IOException {
        ServerSocket s = new ServerSocket(Integer.parseInt(args[0]));
        while (true) { new Thread(new Comanche(s.accept())).start(); }
    }

    public void run () {
        try {
            InputStreamReader in = new InputStreamReader(s.getInputStream());
            PrintStream out = new PrintStream(s.getOutputStream());
            String rq = new LineNumberReader(in).readLine();
            System.out.println(rq);
            if (rq.startsWith("GET ")) {
                File f = new File(rq.substring(5, rq.indexOf(' ', 4)));
                if (f.exists() && !f.isDirectory()) {
                    InputStream is = new FileInputStream(f);
                    byte[] data = new byte[is.available()];
                    is.read(data);
                    is.close();
                    String s = new String(data);
                    out.print("HTTP/1.0 200 OK\n\n"+s);
                } else {
                    out.print("HTTP/1.0 404 Not Found\n\n <html>Document not found.</html>");
                }
            }
            out.close();
            s.close();
        } catch (IOException ex) {
            ex.printStackTrace();
        }
    }
}

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public HdfsClient() {
    try {
        Socket socket = new Socket(nameNode, portsNameNode);
        OutputStream os = socket.getOutputStream();
        InputStream is = socket.getInputStream();

        ObjectOutputStream oos = new ObjectOutputStream (os);
        ObjectInputStream ois = new ObjectInputStream (is);

        oos.writeObject(CommandeNameNode.NM_ADD);
        oos.writeObject("tmp");
        oos.writeObject("KV");
        boolean endAdd = (boolean) ois.readObject();

        oos.close();
        os.close();
        ois.close();
        is.close();
        socket.close();
    } catch (Exception ex) {
        ex.printStackTrace();
    }
}

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public static void HdfsDelete(String hdfsFname) {
    try {
        Socket socketN = new Socket(nameNode, portsNameNode);
        OutputStream osN = socketN.getOutputStream();
        InputStream isN = socketN.getInputStream();
    }
}

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ObjectOutputStream oosN = new ObjectOutputStream (osN);
ObjectInputStream oisN = new ObjectInputStream (isN);

oosN.writeObject(CommandeNameNode.NM_CONTAINS);
oosN.writeObject(hdfsFname);

if ((boolean) oisN.readObject()) {
    boolean endContains = (boolean) oisN.readObject();
    for (int i = 0; i < nbNodes; i++) {
        oosN.close();
        osN.close();
        oisN.close();
        isN.close();
        socketN.close();
        // Envoi de l'ordre de suppression au serveur
        Socket socket = new Socket(nodes[i], ports[i]);
        OutputStream os = socket.getOutputStream();
        InputStream is = socket.getInputStream();

        ObjectOutputStream oos = new ObjectOutputStream (os);
        ObjectInputStream ois = new ObjectInputStream (is);
        oos.writeObject(CommandeCmd.CMD_DELETE);
        oos.writeObject(hdfsFname);

        boolean answer = (boolean) ois.readObject();
        if (answer) { //suppression réussie

        } else { //échec de la suppression
            System.out.print("Le fichier correspondant n'a pas pu être supprimé sur le serv
eur ");

            System.out.print(i);

            oos.close();
            os.close();
            ois.close();
            is.close();
            socket.close();

            throw(new Exception());
        }
    }

    oos.close();
    os.close();
    ois.close();
    is.close();
    socket.close();

    socketN = new Socket(nameNode, portsNameNode);
    osN = socketN.getOutputStream();
    isN = socketN.getInputStream();
    oosN = new ObjectOutputStream (osN);
    oisN = new ObjectInputStream (isN);

    oosN.writeObject(CommandeNameNode.NM_DELETE);
    oosN.writeObject(hdfsFname);
    boolean endDelete = (boolean) oisN.readObject();

    oosN.close();
    osN.close();
    oisN.close();
    isN.close();
    socketN.close();
}
} else {
    System.out.println("Le fichier que vous essayez de supprimer n'existe pas");
}
} catch (Exception ex) {
    ex.printStackTrace();
}
}

```