PROJECT 2 REPORT

Implementation details:

The code runs by running the router as a normal c program. After the program is executed, it asks for the topology file and does not allow any input other than the command:

- server -t <topology-file-name> -i <routing-update-interval>

After the file is provided by the above command, the router starts. It supports commands like update, step, disable, display, crash, packets etc.

When an update command is performed, it updates only the current router's cost. The routing updates are sent by the command 'step' and then only other neighbors can update the cost.

Step command sends the packet which has the fields in specified format and size of all the servers' information to all neighbors. The neighbors then update their own routing tables based on the distance vector protocol, where the previous cost is compared and minimal cost to a router is stored.

Display command displays the routing table i.e. server 1 id, server 2 id and total cost to the server.

Packets command shows the number of packets arrived after the previous packet command has been run or after start of the program.

Disable command disables the router with given link. This is done by assigning infinity value to the edge.

(Note- Infinity value is represented by the integer 9999.)

Crash command crashes the router and assigns infinity cost to all the neighbors.

Data structure of the update message:

File name: ubit_shriyasu_proj2.c

Line number: 28

Data structure of the routing table:

File name: ubit_shriyasu_proj2.c

Line number: 18