

CS3530: Assignment – 2

Report – basic – 4H

a)

Pcap traces at H1 can be found in folder named “temp” in “basic” folder as “h1.pcap” which includes the three types of requests: GET, PUT, DELETE.

To get h1.pcap file first we set up the Mininet environment by executing commands

```
$ make clean
```

```
$ make run
```

Then in Mininet environment we executed “xterm h1”, we got terminal access to the host h1(Client) with IP address 10.0.1.1, similar for host h2(Server) with IP address 10.0.1.2.

Then we open Wireshark to trace the packets for host H1 by executing the below,

```
$ h1 wireshark &
```

Which opens “h1-eth0” interface, in which can see the requests and their responses.

b)

Time is calculated in milliseconds(ms)

We have calculated end-to-end time from the wireshark timestamps.

Key	Req1	Req2	Req3	Avg. Time
Key1	2.038	1.501	1.490	1.676
Key2	1.823	1.410	1.615	1.616
Key3	1.078	1.263	1.115	1.152
Key4	1.084	0.457	1.223	0.921
Key5	1.380	1.134	1.095	1.203

Key6	1.390	1.615	1.260	1.422
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Observations:

By comparing the average time taken for each key, we can the fluctuations which are due to

1. **Network Latency:** The time it takes for data to travel over the network can vary based on factors such as physical distance, network congestion, and the quality of the network connection.
2. **Network Conditions:** Network congestion or instability can lead to variable response times. A stable and uncongested network typically results in more consistent response times.
3. **Content Complexity:** The complexity of the content being requested can affect response times. Larger or more complex data may take longer to process and transmit.

PLAGIARISM STATEMENT:

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