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1)

Source	Destination	Port Type
80/hh	Dynamic	Port
11	1	IP
H	G	MAC

2)

I) POST method   II) PUT method

III) HEAD method. This method sends a conditional GET to the server without returns the actual file

3)

Cookies are used for the mentioned purpose. The user should be worried because the website has the data and preferences. For private they should accept only trusted cookies.

4)

Users are facing issue because DNS A record is not set right. Its due to the TTL is not expired but IP has been changed.

5)

Urgent Pointer: Indicates that certain data with the same is urgent

PSH (Push flag): Instructs receiver to immediately deliver it to application layer bypasses any buffer

6]

Access delay is high because there is no web cache. The data has to be fetch from external each time that is why the access delay is so high.

7]

i) Given total RTT 850 ms, Per object = 50, 2SH = 2m

∴ $850 - 50 = 800$ Let single RTT = x

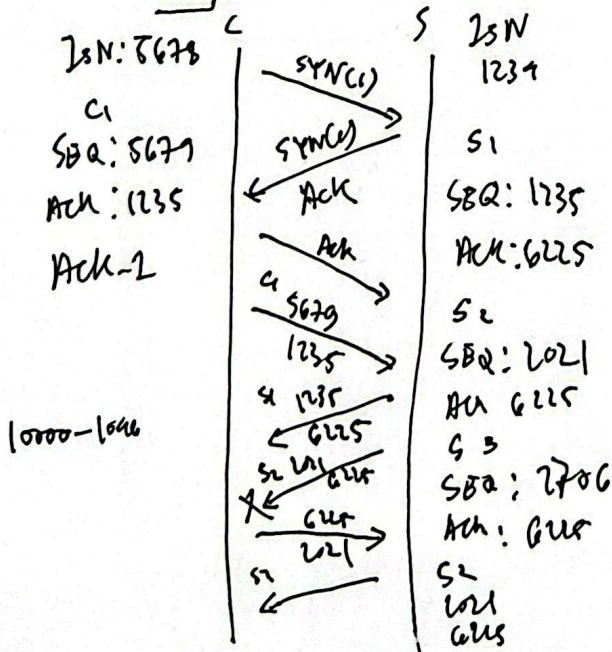Connection is persistent

∴ $1\,RTT + 24\,RTT = 800$

$\Rightarrow 25\,RTT = 800$

$\Rightarrow RTT = \dfrac{800}{25} = 32\,ms$

ii) Total object size

$5 \times 6 + 19 \times 2 = 30 + 38 = 68 \times 8 = 544$

∴ $FTT = \dfrac{544}{200} = 2.72 \times 800 = \cancel{5440\,ms}\ 2220\,ms$

8]

ISN: 5678
C
SEQ: 5671
Ack: 1235
Ack-2

10000-1046

S ISN
1234

S1
SEQ: 1235
ACK: 6225

S2
SEQ: 2021
Ack 6225

S3
SEQ: 2706
Ack: 6225

S2
1021
6225

I) Ack-2
   SEQ: 6225 Ack: 2562

II) 8958

III) SF value of the seg
   Second S2 : 2021