Answer

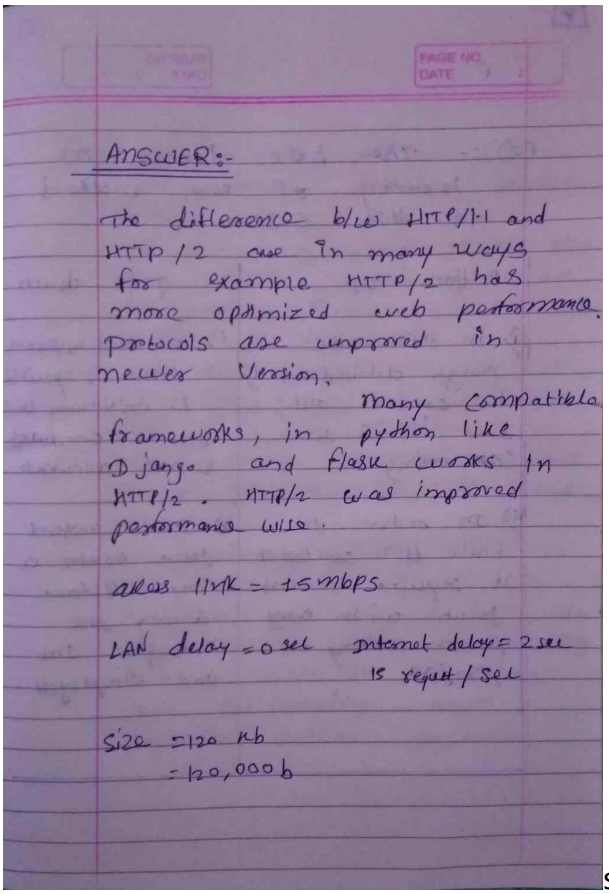
Answer :

Given =

Consider the network provided in Fig. 2.12 of the textbook. For simplicity, let's assume that the LAN delay is 0 and Internet delay 2 seconds. Assume that average object size is 80Kb and there are 12 requests per second from institution's browsers to the origin servers.

Solution =

Step 1)


ANSWER:-

The difference b/w HTTP/1.1 and HTTP/2 are in many ways for example HTTP/2 has more optimized web performance. protocols are improved in newer version.

many compatible frameworks, in python like Django and flask works in HTTP/2. HTTP/2 was improved performance wise.

access link = 15 mbps

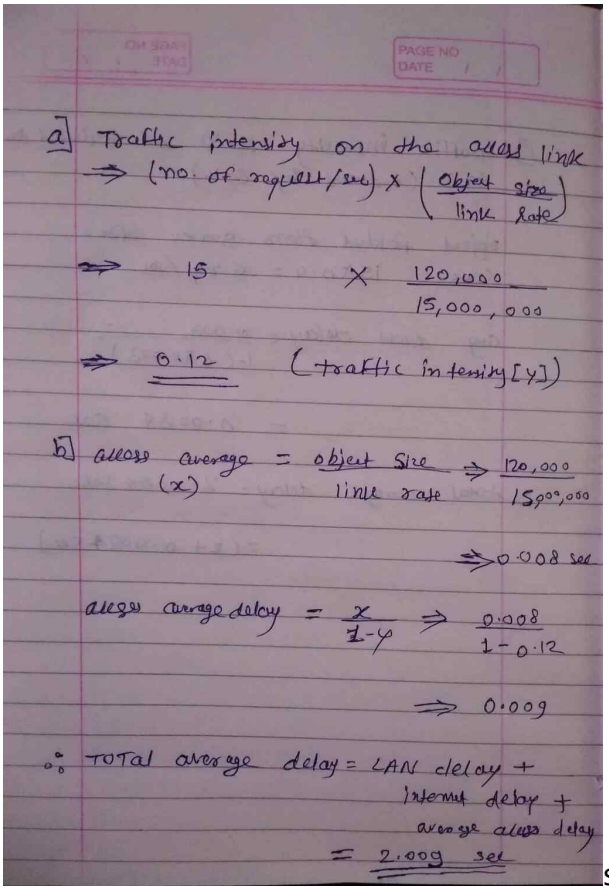
LAN delay = 0 sec Internet delay = 2 sec

15 request / sec

size = 120 Kb

= 120,000 b

step 2)



a] Traffic intensity on the access link
⇒ (no. of request/sec) × (object size / link rate)

⇒ 15 × 120,000 / 15,000,000

⇒ 0.12 (traffic intensity [y])

b] access average = object size / link rate ⇒ 120,000 / 15,000,000
(x)

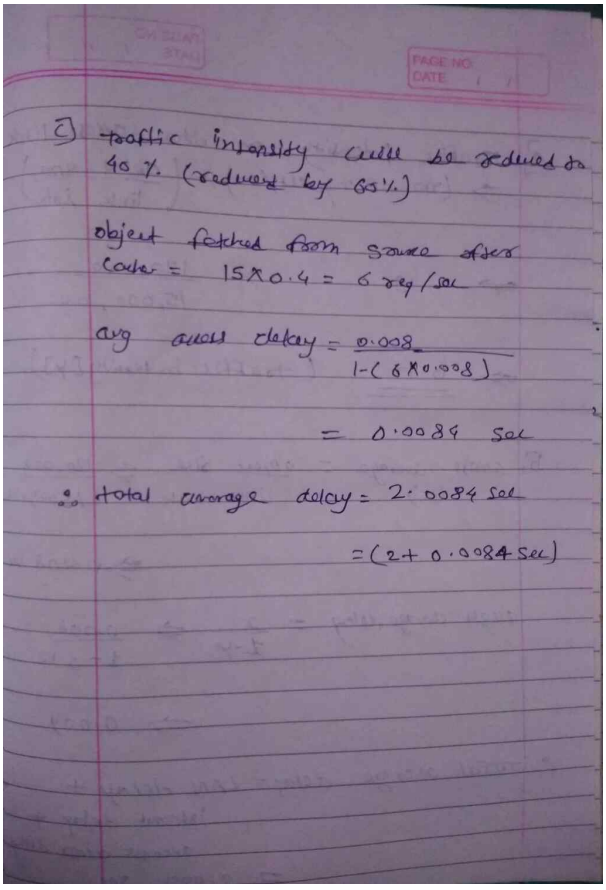
⇒ 0.008 sec

access average delay = x / 1-y ⇒ 0.008 / 1-0.12

⇒ 0.009

∴ TOTal average delay = LAN delay + Internet delay + average access delay
= 2.009 sec

step 3)



c] traffic intensity will be reduced to 40 %. (reduced by 60%)

object fetched from source after cache = 15 × 0.4 = 6 req/sec

avg access delay = 0.008 / 1-(6×0.008)

= 0.0084 sec

∴ total average delay = 2.0084 sec

= (2 + 0.0084 sec)

Likes: 0 **Dislikes: 1**
