

CSE421

Section: 23

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Q1

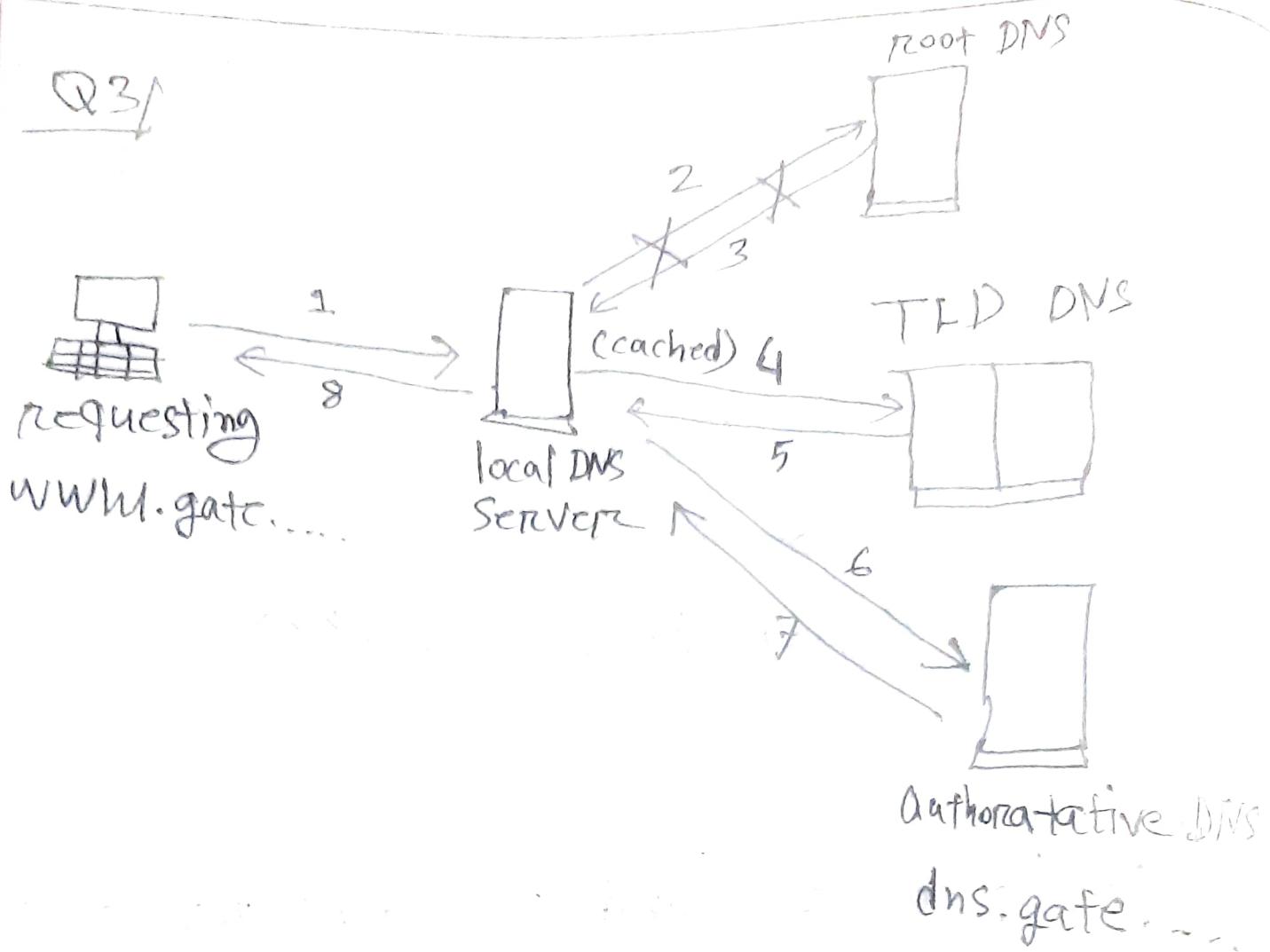
Because standards ensure compatibility, interoperability and reliability between different networking devices.

Q2

Difference for varying load times

- |   |  |
|---|--|
| ① Multiple connection for multiple TCP objects. | ② Use single TCP connection for all object |
| ① Send one request at a time.                   | ② Send many requests in parallel           |

Q3/



Q4/

IMAP is helpful when

- Slow or limited Internet connection
- Storage limitation
- Can see subject lines and sender info for better .

Q5 Use TCP - because it ensures reliable, error-free, and sequential data transmission, which is critical for accurate sensor data collection.

Q6 It happens when receiver sends three duplicate ACKs from their side. When receiver keep getting later segment then it sends the 3ACK to know the sender about it.

Q7

- i) Total RTT =  $27+27 \text{ ms} = 54 \text{ ms} = 0.054 \text{ s}$
- ii) Object size

$$4.345 = 24 \times \left(0.054 + \frac{3}{25} + 0.005\right)$$

$$\therefore \text{Obj size} = 3.031 \text{ Mb}$$

Q3b1

I

S<sub>3</sub> → Sequence #: 2507

Acknowledge #: 1676

II

Seq (Fin) = 1676

Ack (Fin) = 2142

III

Rwnd = 6579 byte