4-2-26
Wednesday

Networking Interview Notes

by Keshav Sharma

Q3, 4, 5, 13, 14, 15, 20, 23, 24, 35, 36, 49, 50, 51, 54

(Q3) OSI Software / User support layers

→ (1) Application layer
→ Provides network to end-user applications.
→ closest layer to user.
→ enable web, email, file transfer.
→ interface b/w app ~~user~~ & network.
→ Eg:- HTTP → web
FTP → File Transfer
SMTP → Email
DNS → Domain → IP

PTO →

(2) Presentation
→ Responsible
encryptio
→ Converts
format
→ Handles
→ Handle

(3) Session
→ Respon
managing
→ Sta
duri / afte
→ Pro

(Q4) Hard

(2) Presentation Layer

→ Responsible for data format, encryption and compression.

→ Converts data into common format.

→ Handles Encryption/decryption.

→ Handle Compression.

(3) Session Layer

→ Responsible for establishing, managing and terminating sessions.

→ Starts, maintains & ends session duriy/after communication.

→ Provides checkpoint/Recovery.

(Q4) Hardware/Network support layers in OSI Model.

PTO →

(1) Network layer

→ Responsible for Routing & addressing.
→ Finds best path b/w networks
→ Uses IP address.
→ works with routers.

(2) Data Link Layer

→ Responsible for node to node delivery and error detection.
→ Uses MAC address.
→ Detects error.
→ Data is sent as frames.

(3) Physical Layer

→ Responsible for transmitting raw bits over the medium.
→ Sends 0 and 1 as signals
→ Defines Cables, Connector, voltage.

(Q5) HTTPS Prot

→ HTTPS (Hyp

→ Secure versi
safe web co
→ Default po
→ Uses SSL
→ protects da
Authenti
→ URL Sta

(Q13) What is C
Availabil

→ (CIA)

(1) Confiden

→ Only
data

→ Prev
→ Eg:

(Q5) HTTPS Protocols

→ HTTPS (Hypertext transfer protocol secure)
→ Secure version of HTTP used for safe web communication.
→ Default port number:- 443
→ Uses SSL/TLS encryption.
→ protects data privacy, integrity, authentications.
→ URL starts with https://

(Q13) What is confidentiality, Integrity & availability? (CIA Triad)

→ (CIA) basic goal of cybersecurity.

(1) Confidentiality

→ Only authorised people access data.
→ Prevents unauthorised access.
→ Eg:- Passwords, encryption.

(2) Integrity

→ data should be accurate & not modified illegally.
→ Prevents unauthorised changes.
→ Uses hashing / digital signature.

(3) Availability

→ data should be available when needed.
→ System should be accessible.
→ DoS attack: threat

(Q14) VPN (Virtual Private Network)

→ Secure encrypted connection over the internet.
→ Extends private network over public internet
→ Uses encryption + tunneling
→ Allow remote access safely.

→ Hides Usen

(Q15) What is
Assymet

→ Symmetr
→ Same ke
decry
→ Fast &
→ Key s
→ Assymm
→ Publ
Priv
→ Mor

(Q20) IP

→ Fire
→ Filt
tra
→ Fast
→ Allo

→ Hides User IP Address.

(Q15) What is Symmetric and Assymetric encryption?

→ Symmetric Encryption

→ Same key for encryption & decryption.

→ Fast & simple

→ Key sharing is risky.

→ Assymmetric encryption

→ Public key → encrypt
Private key → decrypt

→ More secure but slower.

(Q20) IPS Vs Firewall

→ Firewall

→ Filter incoming or outgoing network traffic based on rules.

→ First line of defence.

→ Allow/Block using IP/Port/Protocol.

IPS (Intrusive Prevention System)

→ Detects & stop attack real-time.
→ Monitor network for malicious activity.
→ Block attack automatically.
→ More advanced than firewall.

(Q23) Main Purpose of DNS server

→ Domain Name System (DNS)
→ domain name → IP address.
→ Internets phonebook.
→ Humans use names (google.com) but Computer use IP
→ Finds correct server when we open a website.

(Q24) Protocol and port no of DNS.

→ Protocol : TCP & UDP

Port Number : 53

UDP 53 : Normal DNS Queries (fast)

Tcp 53 : Large Response / Zone Transfer.

(Q35) Bluetooth

Bluetooth

→ Short range
Communication for
data transfer.
→ Range is
→ Low Power
consumption
→ low bandwidth
→ Connects
device (

(Q36) Rev

→ This
Server
to C
→ Cl
→ Im
→ H

(Q35) Bluetooth Vs Wi-fi

Bluetooth	Wi-fi
→ Short range wireless communication for small data transfer.	→ Wireless network technology for internet access.
→ Range is 10meter	→ Range: 100meter
→ Low Power consumption	→ High Power consumption
→ low bandwidth	→ High bandwidth
→ Connects few device (earbuds)	→ Many users use by router use.

(Q36) Reverse Proxy

→ This sits between clients & web servers and forwar clients request to correct server.

→ Client dont talk directly to Server.

→ Improved Security, load balancing, performance.

→ Hides real server (Protects backend).

(Q49) Define 'Jitter'

→ Jitter is the variation in packet delay during transmission.

→ Packet arrive different time unevenly.

→ Affects voice/video calls & streaming.

→ Measured in milliseconds (ms)

(Q50) Why bandwidth is important to network performance parameters?

→ Bandwidth is amount of data that can be transmitted in a given time.

→ Measured in bps (bits per second)

→ Higher bandwidth → more data sent at once.

→ Affects download speed, calls.

→ Latency coordinate for network speed.

(Q51) Identify

→ if IP in

eg:- 10.

its Privat

else: P

(Q54) Flow

→ Flow c

to pre

data

hand

→ Use

→ Rec

→ Se

th

(Q53) Identify Private or Public IP

→ if IP in reserved ranges
Eg:- 10.0.0.0 - 10.255.255.255
its Private IP
else: Public IP

(Q54) Flow control achieved by TCP

→ Flow control is used by TCP to prevent sender from sending data faster than receiver can handle.

→ Use Sliding window protocol.

→ Reciever send window size (buffer) (capacity)

→ Sender sends data within that limit.

END