OSI Layer

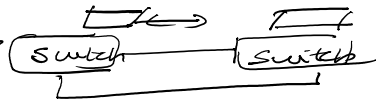
07 February 2024 12:48

OSI Layer Model

OSI — 7 layers

1) physical layer
— Bits ⇒ Hardware — {Bits (a) Voltage}
All your network cables
Fiberoptic cables

2) Data-link layer — {Frame}
— Hop to Hop delivery
— Between two n/w devices

Switches are L2 layer 

— MAC Addresses
Medium Access control

3) Network Layer — Packet
— "End to End" delivery.
— How does a packet get from one host to the other
— IP address
— Routers are network layer devices — They use IP addresses

4) Transport Layer:
— Service to Service delivery.
— Ports to differentiate services.
— TCP / UDP are L4 protocols
One service to the other service

{HTTP client} ⟷ {Server} connections from port no

5) Session Layer
— Used to create, maintain and terminate sessions.
— Session parameters.
— Session ID —

— Session ID —

Protocols : RTCP
: PPTP
: RPCP
} Session-Layer protocols

6) Presentation Layer —
Used to presenting (or) translating

— Encoding & {Encryption}
— Encryption and data encoding is done in the presentation layer
— TLS/SSL — Presentation layer

Ports
[ ] (2)

7) Application Layer
— Sending (or) recieving application data
— Applications use this layer to communicate with each
— Standard way of communications b/w two applications

App to App

1) HTTP/S
2) SMTP
3) DNS
4) POP3
5) IMAP
6) FTP
7) TFTP

SFTP
RDP
RTP
LDAP

client {HTTP} standard server

Based on Rule / Normal
Attacks IPS/IDS
Attacks

Quiz — 2mins

Firewall — Network control traffic
IPS/IDS — Network attacks detection
DNS — 53
DHCP — 67, 68 Pr

2 ports

1) LDAP — 389 — 636 — SSL/TLS
RDP — 3389

DHCP use two ports
67 — client
68 — server

— client server attack scenario

Firewall —
Keywords
monitors and controls the

IDS/IPS
IDS/IPS — suspicious activity
Detects attacks

IDS and IPS — Use keywords Network based

{Firewall and IDS/IPS} {Monitors, Detects, Alerts
Detects, Alerts and prevents}

Infinite page length in onenote? —