

09/07/22 Layer 3:

Routers:-

09/12/22 Autonomous Systems (ASes):-

(dynamic Routing Protocol)

Border Gateway Protocol (BGP):- when data

Also known as external gateway protocol.

is sent via the internet, BGP is responsible for looking at all of the available paths that data could travel and picking the best route, which usually means hopping betw ASes.

N/W Address Translation (NAT):-

→ Many router clients share their gateway routers IP address externally.

→ Internally, the router gives every machine a local IP address.

→ The Router keeps track of who starts outgoing connections, and make sure the replies go to the right place.

(dynamic Routing Protocol)

Open shortest Path First (OSPF):-

↳ Also known as internal gateway Protocol.

↳ Prefers fastest path rather than shortest path.

↳ Internet Protocol is used in OSPF,

where as transmission Control Protocol is used.

↳ OSPF is an intra-domain Routing Protocol, while BGP is inter-domain Routing Protocol.

Bus Switching!

• Head of Line Blocking:- If any two ports has the same destination as their source, then it forms a head of line blocking or contention.

Internet Control Message Protocol (ICMP):-

- used to troubleshoot layer 3 routing prob.
- Ping uses (ICMP) packets to check connectivity
- Traceroute uses (ICMP) packets to check routes.

Dynamic Host Configuration Protocol (DHCP):-

- DHCP DISCOVER.
- DHCP OFFER.
- DHCP REQUEST.
- DHCP ACK.