

management plane

monitors traffic conditions, the status of the network, and allows network admin to oversee the network and gain insight into its operation.

Application layer

handles communication resource requests or information about the network.

control layer

uses information from the application to decide how to route a data packet on the network and to make decisions about how traffic should be prioritized, serviced, where to forward.

infrastructure layer

physical networking devices that deliver information from the control layer where no more data.

RADIUS → Remote Authentication dial-in user service

→ provides AAA management for user connecting to wired or wireless network

Proxy server:- Is a application that acts as intermediate between a client requesting a resource and server providing that resource

Network controller:- Is a software that orchestrates network functions by acting as an intermediary between business and the network infrastructure

- OC-3 is types of fiber connection
- WiMax is type of microwave
- Starlink is type of satellite

MDF → A main distribution frame is a signal distribution frame for connecting equipment (inside plant) to cables and subscriber control equipment (outside plant).

IDF → Intermediate distribution frame is central office or customer premises

different AS.

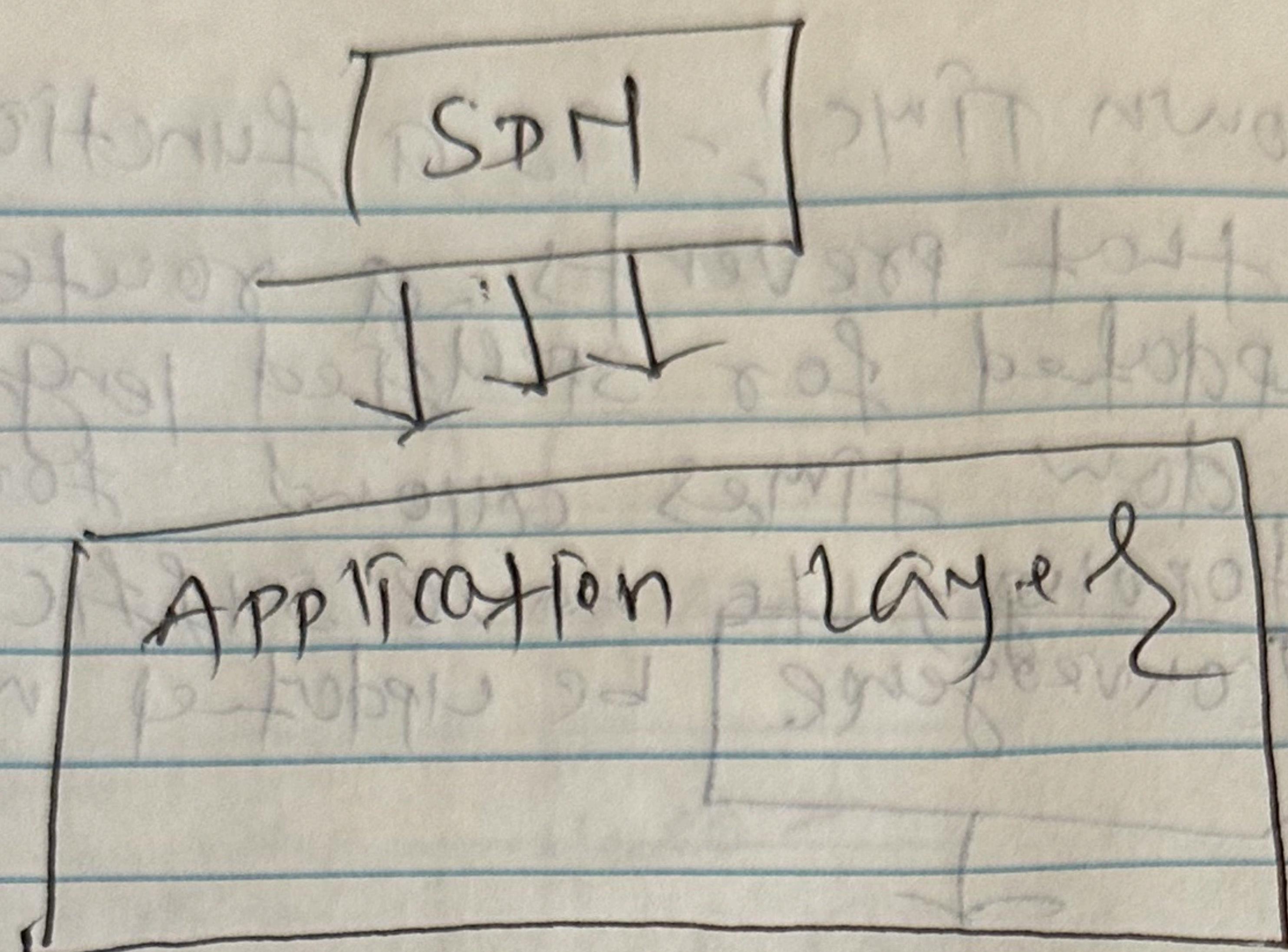
Hold down time :- is a function of a router that prevents a route from being updated for specified length of time. A hold down times allows for the routes in a topology to have sufficient time to reach [convergence] be updated when a router is

All routers learn the route to all connected network

Business continuity plan

- Focuses on the factors carried out by an organization to ensure that critical business function continues to operate during and after disasters
- Network controller → A network controller is a software that orchestrates network functions by acting as an interface between business and network infrastructure.

- Patch Panel → A patch panel is a device or unit featuring a number of jacks usually of same or similar type for the purpose of connecting and routing cables for monitoring interconnecting and testing circuits.



Software-defined networking (SDN) is an architecture that abstracts different, distinguishable layers of network to make networks agile and flexible.

15G

cellular technology

lower-band

Avg - 55 mbps

Theoretical -
150 mbps

mid-band

Avg - 150mbps

Theo -
1.5mbps

high-band
mm wave

Avg - 3 Gbps

Theo - 70 Gbps

4G - cellular technology

LTE

The - 150mbps
Avg - 20mbps

LTE + A

fl - 300mbps
Avg - 40mbps

Runt - less than 64 bytes
burst - more than 1718 bytes

optical link budget : is a calculation that considers all the anticipated losses along the length of fiber optic connection.

AUP - acceptable use policy is a set of rules applied by the owner, creator, or admin of a network, website, or service, that restrict how the network, website or system may be used.

MOU - memorandum of understanding is non-binding agreement between two or more organizations to define what common actions they intend to take.

VNC → is an open source remote access tool and protocol. It is used for screen sharing on Linux and macOS.

MPLS → multi-protocol label switching is a mechanism used within computers infrastructure to speed up the time it takes a data packets to move from one node to another.

different SP

Routing protocols

① Distance vector protocols

→ measure distance - called hops - it takes data to arrive at its destination within a system or application.

② Link state protocols

→ find the routing path by calculating the speed and the cost of resource associated with each potential path.

③ Interior gateway protocol ~~IGP~~ IGP

→ exchange information with others routers within single AS.

→ RIP (RIPv1, RIPv2)

(EGP) ④ exterior gateway protocol → communicate information between routing networks in different AS.