Forwarding, Routing

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Forwarding: It's the process of placing the packet in its route. It requires a routing table.

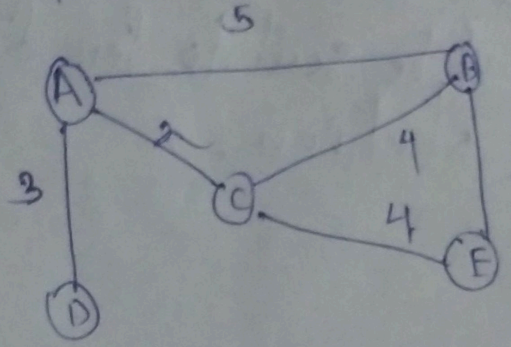
Routing Protocols

Distance Vector Routing:

Here least cost route = Route with minimum distance.

It has three phases:

Step 1: Initialization:- At this stage each host can only have the distance of its immediate neighbours by sharing a message with them. Distance to others are marked as ∞.



Host A

Dest.	Cost	Next
A	0	
B	5	
C	2	
D	3	
E	∞	

Host C

Dest.	Cost	Next
A	2	
B	4	
C	0	
D	∞	
F	4	

Step 2:- Sharing: In this phase, first two columns are shared to neighbours. If a row of an neighbour is used, then the neighbour becomes the next hop, for the station corresponding to that row.

Step 3: Updating: In the updating phase

1) Distances are added
2) The new table is compared with old table for each row. The row with lower distance is selected in final table.

RIP (Routing Infm^n Protocol):

RIP implements DVR with following specifications.

① In RIP, the target is a n/w, not an individual host. So the destn column of routing table defines a n/w address.

② The distance is measured in terms of number of n/w to be covered before reaching destination. So distance measure = Hop count.

③ If no of hops > 15, for a destn, it is treated as ∞.

④ The next part refers to the addr of a router which the packet must be sent to for final delivery to the station.