

SPPU-TE-COMP-CONTENT - KSKA Git

Q1. Link state and Distance vector routing protocols are which Layer Protocols as per OSI model?

Ans. Link state and distance vector routing protocols are both Layer 3 protocols in the Open Systems Interconnection (OSI) model:

Q2. Explain link state protocol in brief.

Ans. → Link state protocol:

- Link state routing is a technique in which each router shares the knowledge of its neighbourhood with every other router in the internetwork.
- The three keys to understand the Link State Routing algorithm:

1. Knowledge about the neighbourhood:

- Instead of sending its routing table, a router sends the information about its neighbourhood only.
- A router broadcast its identities and cost of the directly attached links to other routers

2. Flooding:

- Each router sends the information ^{to} every other router on the internetwork except its neighbours.
- This process is known as Flooding.
- Every router that receives the packet sends the copies to all its ~~neighbours~~ neighbours.
- Finally each and every router receives a copy of the same information.

3. Information sharing:

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- A router sends the information to every other router only when the change occurs in the information.

Q3. Explain Distance vector routing protocols in brief.

Ans. The distance vector algorithm is iterative, asynchronous and distributed

→ Distributed:

- It is distributed in that each node receives information from one or more of its directly attached neighbours, performs calculation and then distributes the result back to its neighbours.

→ Iterative:

- It is iterative in that its process continues until no more information is available to be exchanged between neighbours.

→ Asynchronous:

- It does not require that all of its nodes operate in the lock step with each other.

- The distance vector algorithm is a dynamic algorithm.
- It is mainly used in ARPANET, and RIP.
- Each router maintains a distance table known as Vector.