

Routing Algorithms Summary

| | Distance-Vector | Link State |
|----------------------------|---|---|
| Information transmitted | All known nodes, and the distance, or “cost”, to them (distance vector) | All neighbours (nodes on directly connected links), and the cost for reaching them (link state) |
| Information transmitted to | All neighbours | All nodes (using flooding) |
| Processing | <ul style="list-style-type: none">• Compare received distance vector to own distance vector.• Update own distance vector accordingly.• “Bellman-Ford” | <ul style="list-style-type: none">• Compute the network graph from received link state advertisements.• Run shortest path algorithm (“Dijkstra”) to compute shortest path to each node in the network. |
| Used in routing protocols | RIP | OSPF, IS-IS |

Check out Dijkstra animations on Wikipedia: http://en.wikipedia.org/wiki/Dijkstra's_algorithm