

EECS 489 - WN 23

Discussion 8

Announcements

Assignment 3 is out.

Due date: **03/24 2023, 11:59 PM**

Lateday policy:

You have 3 group latedays in total for assignment 2 - 4.

Please compile your code in the VM and test it carefully.

Agenda

- A3 Hints
- Routing Protocol Questions

A3 Hints

WTP-base

Your sender and receiver should work given:

- Timeouts/Large amounts of latency (think 100s of ms)
- Packet loss
- Packet corruption
- Multiple file transfers for 1 receiver lifespan
- Large binary or text file transfers (A video file, a very long text file, etc.)

A3 Hints

WTP-opt

Your sender and receiver should work given:

- Same conditions as last slide
- ACKs should have precisely the same seq as what was sent
- Packets that have been ACK'd should not be retransmitted

i.e make sure the expected “optimizations” are observable

Do not use TCP sockets, the AG knows when you are doing this!

Routing Protocols

Link-State (LS) Routing

- Open Shortest Path First (OSPF)
- Dijkstra's Algorithm

Distance-Vector (DV) Routing

- Routing Information Protocol (RIP)
- Bellman-Ford Algorithm

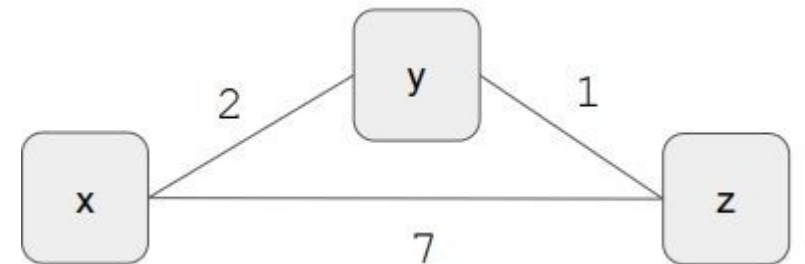
Q | True / False

- Link-State (LS) routing involves broadcasting its local knowledge of the network to everyone.
- Conversely, Distance-Vector routing involves telling only neighbors about its global view.
- Both routing methods involve finding least-cost paths to all other nodes

Q2 Distance-Vector Properties

Yes / No:

- For DV routing, will the count-to-infinity problem occur if we decrease a link's cost?
- What about if we connect two previously unconnected nodes?

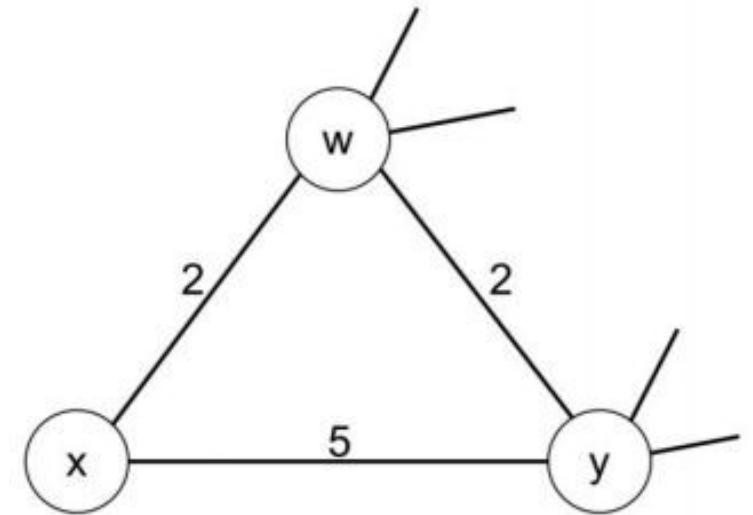


Q3 Distance-Vector Situations

Consider this network fragment:

- **w**'s least-cost path to **u** (not shown) of 5
- **y** has least cost path to **u** of 6
- Complete paths from **w** and **y** to **u** not shown
- All links have strictly positive costs

What is x's distance vector for **w**, **y**, and **u**?



$$D_w(u) = 5$$

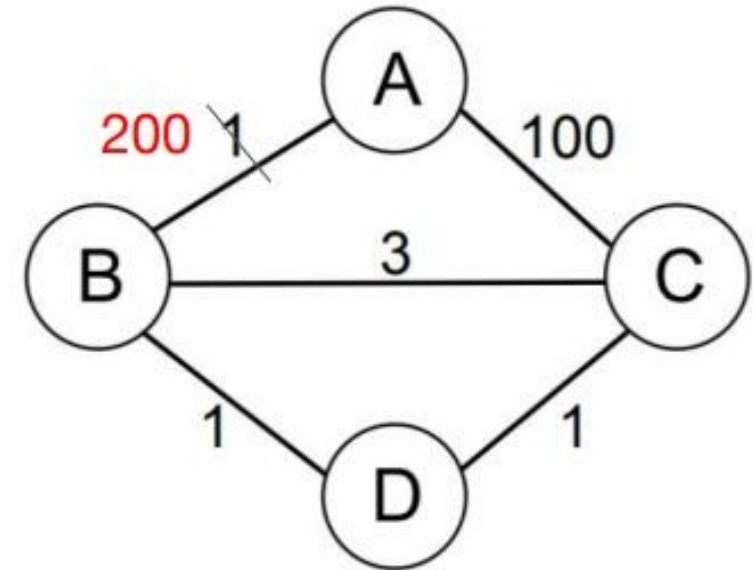
$$D_y(u) = 6$$

Q4 Poisoned Reverse

Consider this network fragment Assume the following events:

- DV is used with **poisoned reverse**
- Routing state has stabilized
- $c(A, B)$ goes from 1 to 200 very suddenly

Will count to infinity occur?



Thanks

Have a good one!