

# Quiz

**Q1** . A domain is only run by a single administrator. True or False?

**Q2** . A Border Router is connected to more than one ISP. True or False?

**Q3** . Each ISP must run intra-domain routing protocols to route packets within its domain. True or False?

**Q4** . In graph abstraction of communication networks, edges represent routers. True or False?

**Q5** . In graph representation of communication networks, all links must have identical costs/weights. True or False?

**Q6** . Shortest path represents the path with minimum number of hops:

- A. when all links have equal cost
- B. in any communication networks
- C. when each hop has at least 1 ms of delay at minimum
- D. when most hops are heavily loaded

**Q7** . In link state routing, routers must flood the network with any changes in its links. True or False?

**Q8** . Distance Vector scales better than Link State because it generally exchanges smaller size update packets with its neighbours. True or False?

**Q9** . With Distance Vector routing, each router must have the knowledge of the complete network topology. True or False?

**Q10** . For a network with 10 routers, the loop in Dijkstra's algorithm will be executed:

- A. only once
- B. 9 times
- C. 10 times
- D. 11 times

Resource created 4 months ago (Wednesday 04 September 2019, 06:45:30 PM), last modified 2 months ago (Sunday 03 November 2019, 01:14:25 PM).

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Xiaohan Zhu (/users/z5187021) about a month ago (Wed Nov 27 2019 23:12:42 GMT+0800 (中国标准时间))

Why does the DV scale better than LS? Is this just because LS should maintain the whole graph?

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Xianlei Wang (/users/z5182667) about a month ago (Tue Nov 19 2019 16:12:22 GMT+0800 (中国标准时间))

For Q10, why it is C

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Salil Kanhere (/users/z3116703) about a month ago (Wed Nov 27 2019 19:11:28 GMT+0800 (中国标准时间))

initially the set  $N'$  is empty and in each execution of the loop one node is added to this set. There are 10 nodes, so ...

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Nathan Wu (/users/z5232983) about a month ago (Thu Nov 28 2019 14:22:09 GMT+0800 (中国标准时间))

Would  $N'$  not be initialised with the self(starting) node? So if there are 10 nodes in total in the network, then a node running the algorithm only needs to run the loop for 9 other routers?

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Salil Kanhere (/users/z3116703) about a month ago (Thu Nov 28 2019 16:58:06 GMT+0800 (中国标准时间))

True.

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Siyin Zhou (/users/z5232974) about a month ago (Fri Nov 29 2019 22:25:13 GMT+0800 (中国标准时间)), last modified about a month ago (Fri Nov 29 2019 22:25:19 GMT+0800 (中国标准时间))

Does this mean B correct rather than C? Thanks.

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Nadeem Ahmed (/users/z3003139) about a month ago (Mon Nov 18 2019 15:26:01 GMT+0800 (中国标准时间))

### Solution:

Q1: True

Q2: True

Q3: True

Q4: False

Q5: False

Q6: A

Q7: True

Q8: False

Q9: False

Q10: C

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Jiahui Luo (/users/z5158415) about a month ago (Wed Nov 27 2019 17:37:10 GMT+0800 (中国标准时间))

for q8, why false. thanks

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Salil Kanhere (/users/z3116703) about a month ago (Wed Nov 27 2019 19:20:31 GMT+0800 (中国标准时间))

it's actually the opposite, in DV each node is exchanging its entire distance vector (cost to every destination) with its neighbor

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Xianlei Wang (/users/z5182667) 2 months ago (Mon Nov 11 2019 18:18:27 GMT+0800 (中国标准时间))

Q1: True

Q2: True

Q3: True

Q4: False

Q5: True

Q6: A

Q7: True

Q8: False

Q9: False

Q10: C

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Chan Kwon Kim (/users/z5204743) 2 months ago (Sun Nov 10 2019 19:35:49 GMT+0800 (中国标准时间))

for Q2, are border routers connected to other border routers and therefore are connected DIRECTLY to many other ISPs?

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