

Anycast vs. Unicast

What we have seen last session:

We made some traceroutes and found out that routes on the Internet are not single-path, by varying parameters.

Q1°) Can you list the three types of load-balancing routers on the Internet? Why is only one relevant to us?

Q2°) How exactly do these kinds of load-balancers operate?

Q3°) Can you cite one limitation of traceroute? (Help: reverse path)

Q4°) Can explain why most paths on the Internet, on top of being multi-path, are also asymmetrical? What does that mean?

New session:

Objective: make a tool for detecting if an IP address is unicast or anycast. This can be useful to compare between anycast and unicast client to server allocation. Today, we will make our own simple tool to rule out if an address is anycast.

Q1°) Explain what is anycast.

Q2°) How is it possible in the context of BGP?

Q4°) Can you list three advantages of using anycast? Three disadvantages?

Q5°) You have been given a list of IP addresses:

["142.250.201.4", "157.240.202.35", "142.250.188.228"]

From this set of IP addresses, would you be able to use measurement techniques to detect which one are anycast addresses?

Help: make some pings

Bonus Stage: can you think of another method, based on DNS?