

Computer Networks

Combining Hosts and Routers



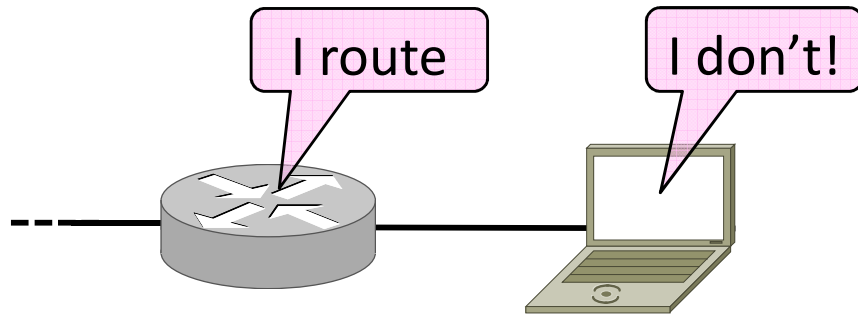
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Topic

- How routing protocols work with IP
 - The Host/Router distinction

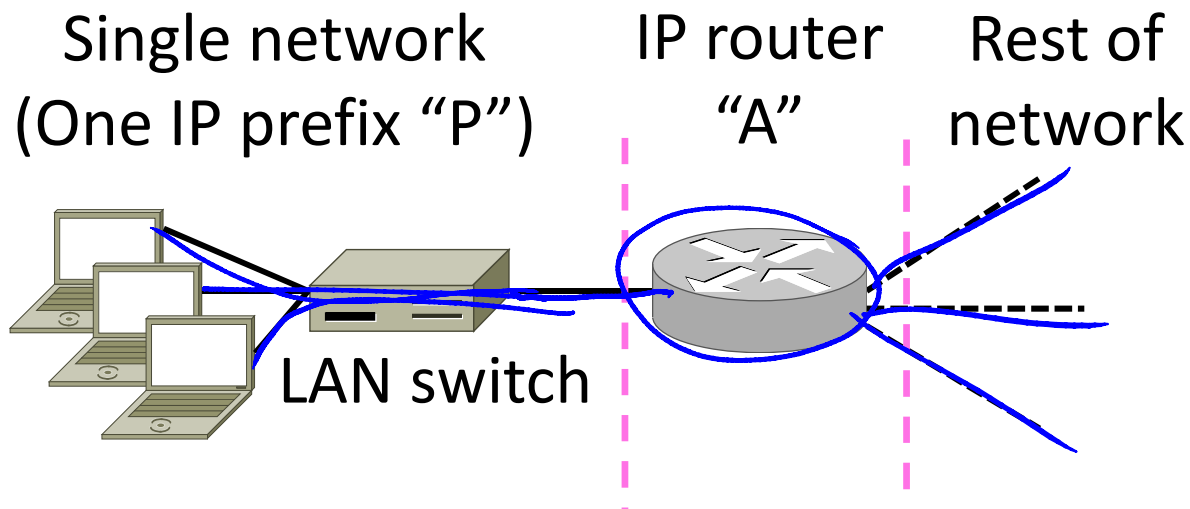


Recap

- In the Internet:
 - Hosts on same network have IP addresses in the same IP prefix
 - Hosts just send off-network traffic to the nearest router to handle
 - Routers discover the routes to use
 - Routers use longest prefix matching to send packets to the right next hop

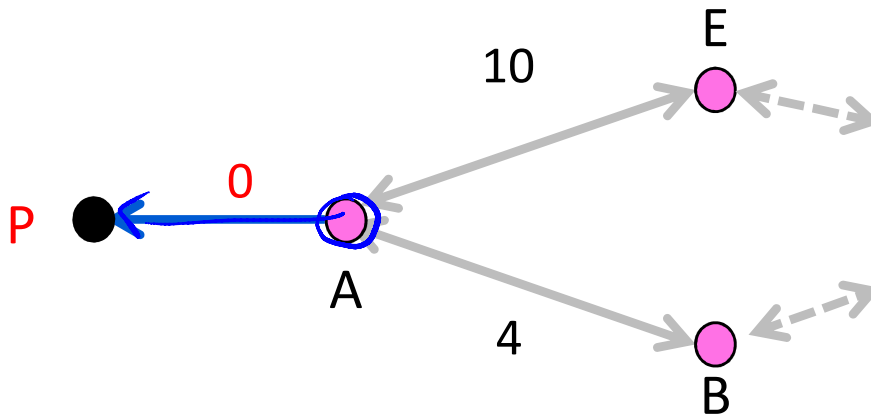
Host/Router Combination

- Hosts attach to routers as IP prefixes
 - Router needs table to reach all hosts



Network Topology for Routing

- Group hosts under IP prefix connected directly to router
 - One entry for all hosts



Network Topology for Routing (2)

- Routing now works as before!
 - ➔ Routers advertise IP prefixes for hosts
 - ➔ Router addresses are “/32” prefixes
 - ➔ Lets all routers find a path to hosts
 - ➔ Hosts find by sending to their router

END

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