

Intra-domain Routing

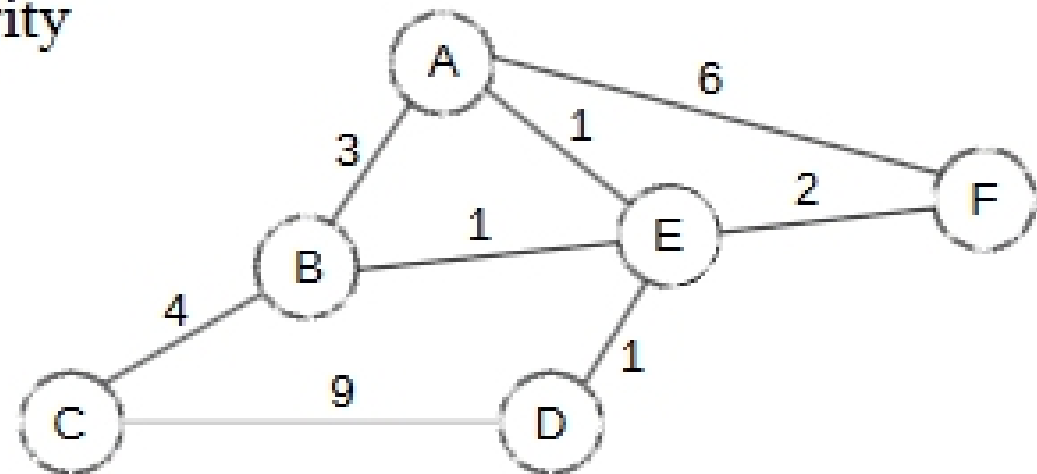
Outline

Introduction to Routing

Distance Vector Algorithm

Overview

- Forwarding vs Routing
 - forwarding: to select an output port based on destination address and routing table
 - routing: process by which routing table is built
- Network as a Graph
 - Assume single admin. authority
 - Assume nodes are routers
 - Assume links have *cost*



- Problem: Find lowest cost path (sum of links) between two nodes

Routing Protocol Issues

- It may be simple to calculate least cost path if graph is static but...
- Links and routers go down
- Links and routers are added
- Traffic can cause links to overload
- How are costs calculated?
- Algorithm must be distributed in order to scale
- Rich area for research due to *distributed, dynamic* nature of the problem
- Different routers can have different routes at same time