

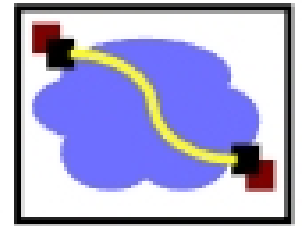


15-441 Computer Networking

Inter-Domain Routing

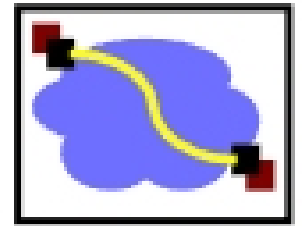
BGP (Border Gateway Protocol)

Important Lessons From Last Lecture



- Every router needs to be able to forward towards any destination
 - Forwarding table must be complete
 - Can rely on friends to tell you how to get there (DV)
 - Can get an entire map of the network (LS)
- Key challenges
 - What if a router fails or is added? → need to inform everyone
 - Soft-state recovery
 - What if people have inconsistent/different views?
 - Loops, count to infinity

Routing Review



- The Story So Far...
 - IP forwarding requires next-hop information
 - Routing protocols generate the forwarding table
 - Two styles: distance vector, link state
 - Scalability issues:
 - Distance vector protocols suffer from count-to-infinity
 - Link state protocols must flood information through network
- Today's lecture
 - How to make routing protocols support large networks
 - How to make routing protocols support business policies