

Routing Algorithms

Fall into two categories (**Exterior vs Interior Gateway Protocols**)

- EGP
 - Routing algorithms used between 2+ A.S.
- IGP
 - Routing algorithms used inside a single A.S.
 - Prioritize speed

Definitions

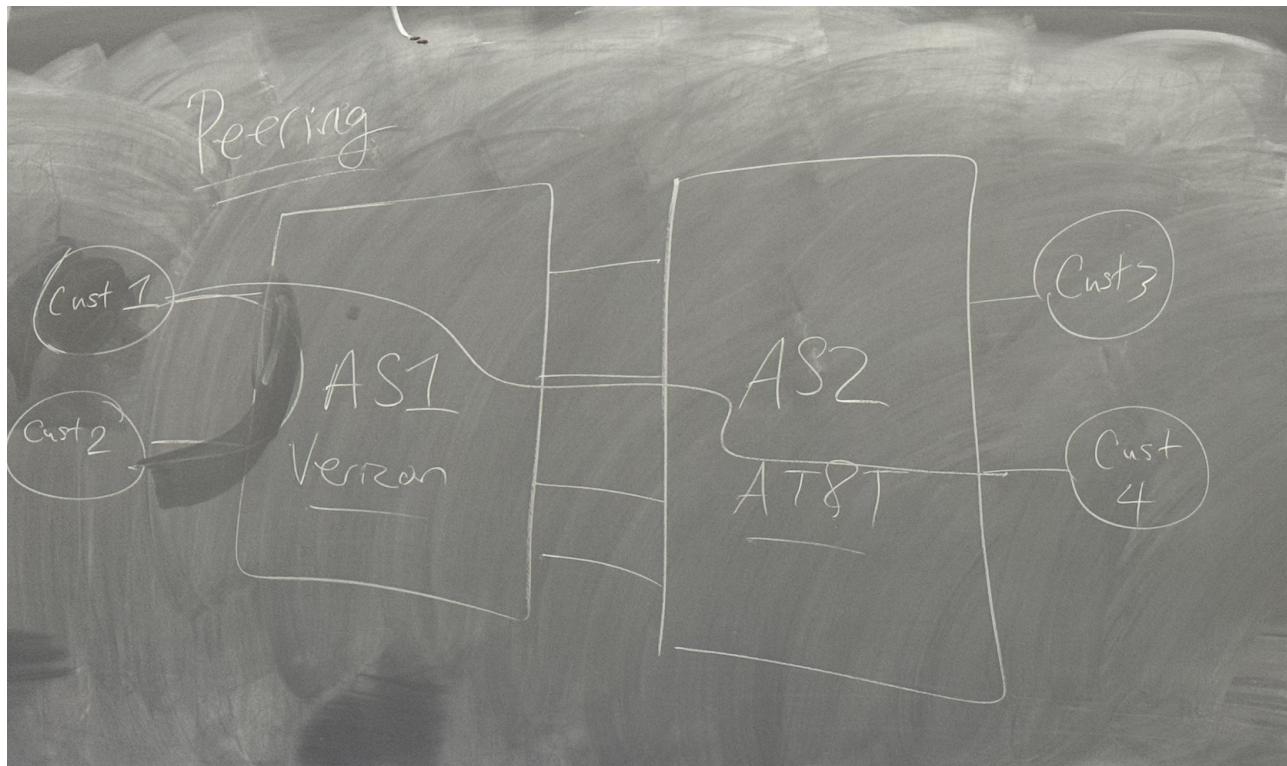
Network Operator:

- Entity in charge of all traffic in and out of a network Autonomous System (A.S):
 - A collection of networks administered by the same network operator under a unified routing policy
 - Version, AT&T, etc.

EGPs

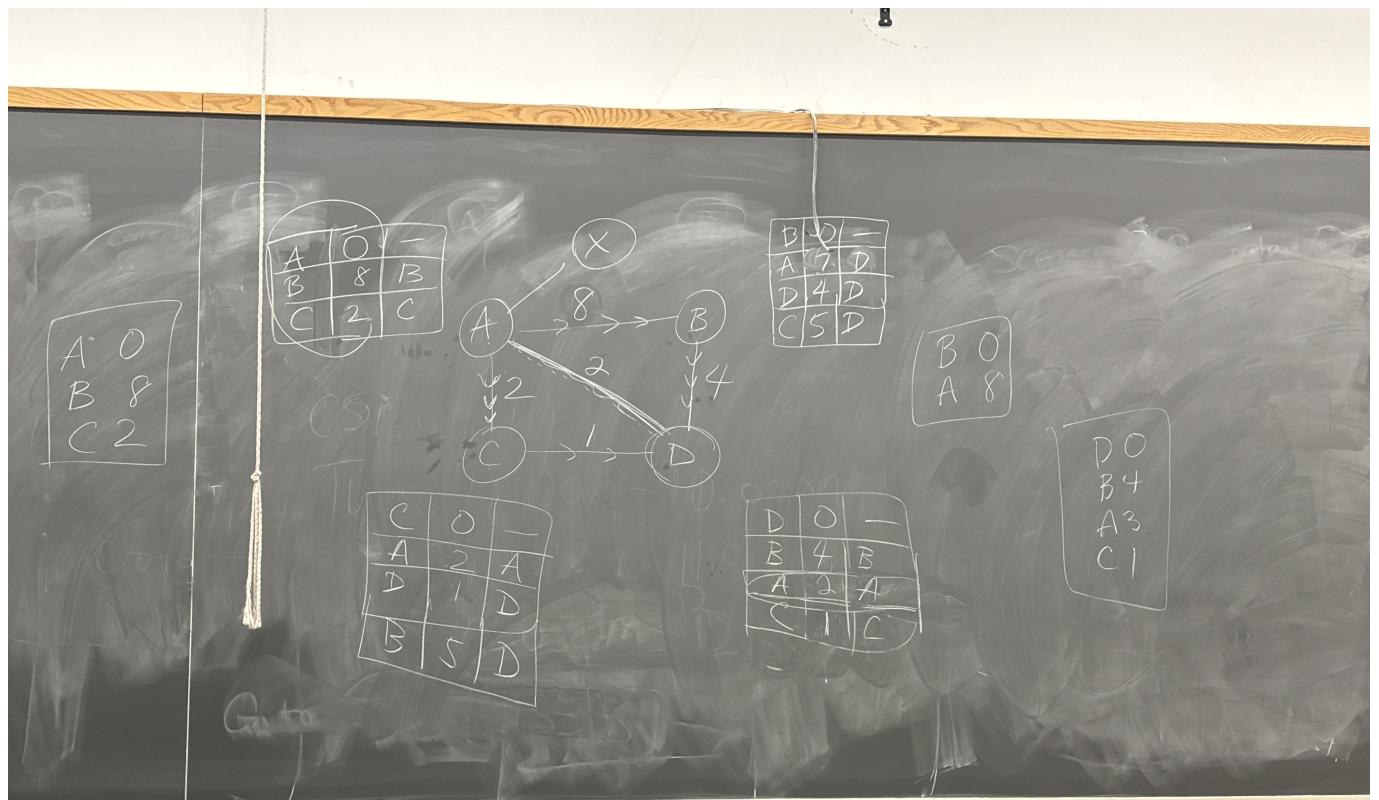
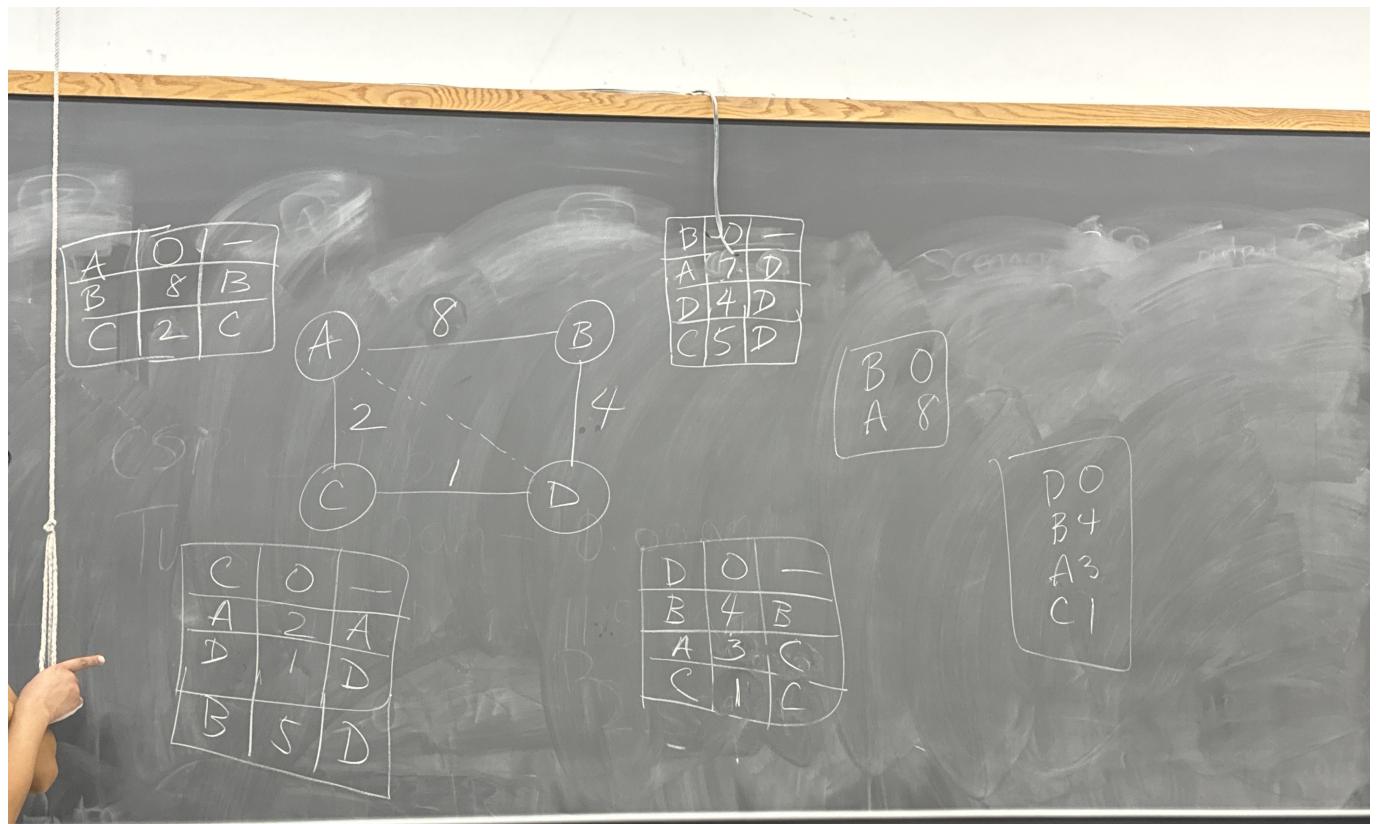
Peering Relationship

- Allows customers of different Autonomous Systems communicate



- Has the disadvantage of high latency when one customer request large amount of data from another AS, slowing down connection of other customers

Day 2



Bellman Ford Equation

- Distance Vector is based off this equation
- $d_x(y) = \min \{ c(x, v) + d_v(y) \}$
 - $d_x(y)$ = shortest path from x to y (cost)
 - v = list of adjacent nodes
 - $c(x, v)$ = cost function of the direct connection between x and v
 - $d_v(y)$ = shortest path from v to y (cost)