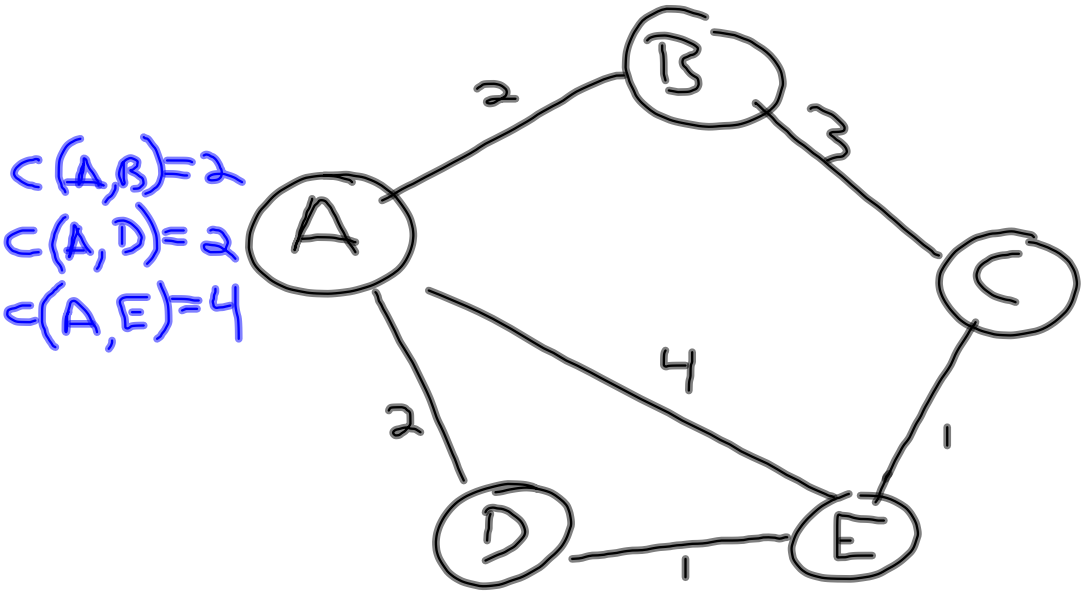
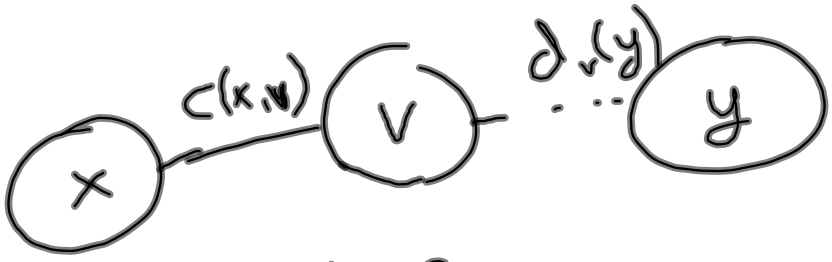


Distance Vector

Bellman-Ford Eq.

$$d_x(y) = \min_v \{c(x,v) + d_v(y)\}$$



$c(x,v)$ – cost from x to v
(info. that is known at x)
- link costs to neighbors

Node A

$c(A,-) = \{0, 2, \infty, 2, 4\}$

from \ to	A	B	C	D	E
A	0	2	~~∞~~ 5	2	~~4~~ 3
B	2	0	3		
C					
D	2			0	1
E	4		1	1	0

distance vectors from other nodes

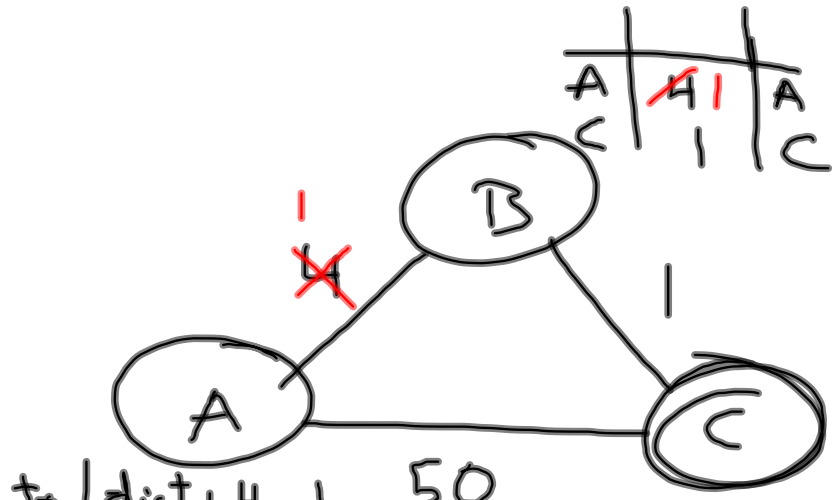
$$d_A(c) = \min_v \{c(A,v) + d_v(c)\}$$

$$= \min(2+3, \infty+\infty, 2+\infty, 4+1)$$

$$d_A(E) = \min_v \{c(A,v) + d_v(E)\}$$

$$= \min(0+4, 2+\infty, \infty+1, 2+1, 4+0)$$

$$= 3$$



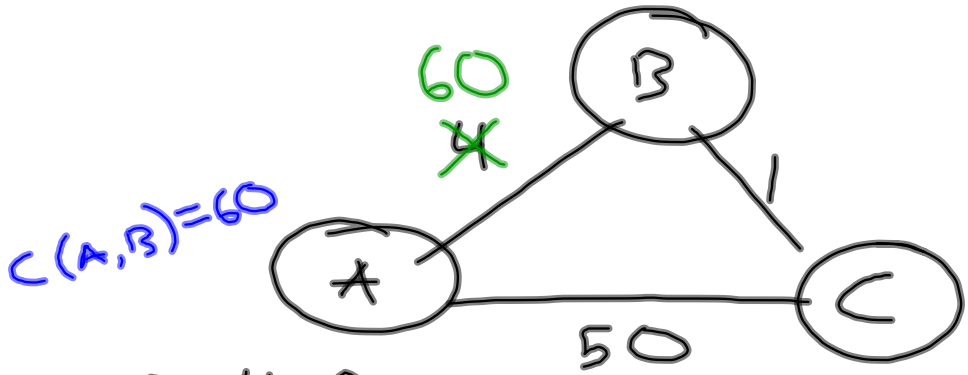
to	dist	through
B	~~4~~ 1	B
C	~~5~~ 2	B

A	~~4~~ 1	A
C	1	C

A	~~B~~ 2	B
B	1	B

min(50, 1+1, 0+50,)

A ~~4~~ 60 A C(B,A)=60
C 1 C



B 4 B
C 5 B

B 1 B
A 5 B

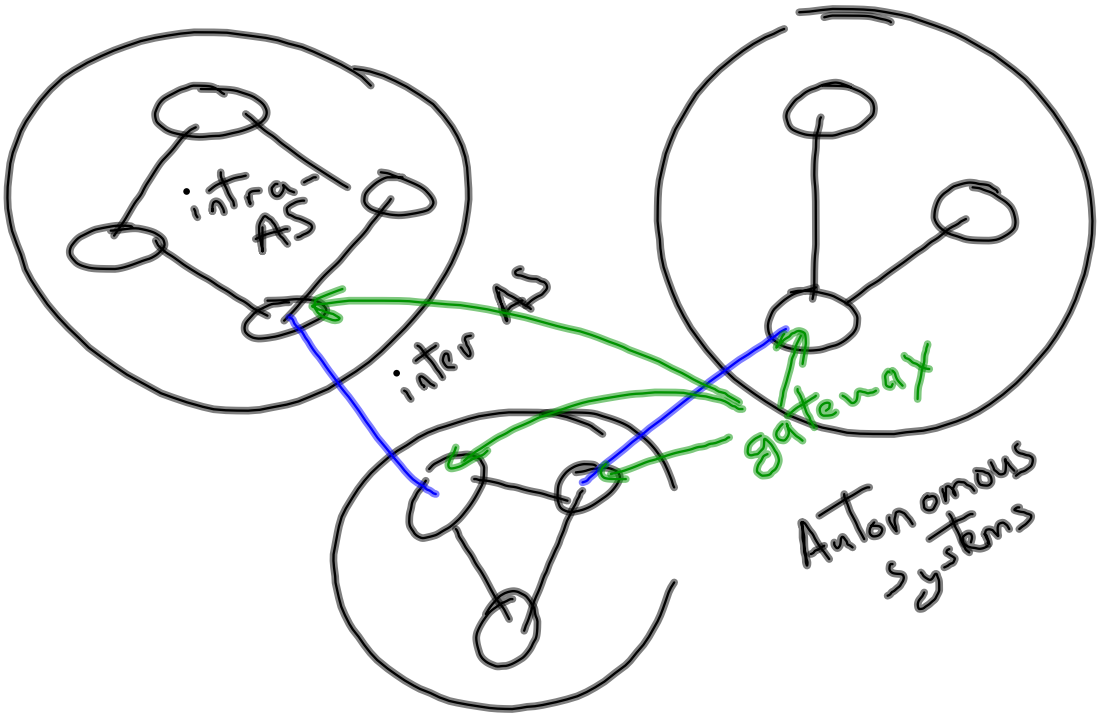
$$d_c(A) = \min_v \left(c(c,v) + d_v(A) \right)$$
$$= \left(1+60,\ 5c+0,\ 0+5 \right)$$

A sends to C

A	B	C
0	60	~~5~~ 8

poisoned reverse

Hierarchical Routing



Intra-AS Routing

RIP - routing information protocol

- distance vector
- distance = # of hops
  - → max 15.
- send every 30 sec.
- send forward table
- no message from neighbor in 180 sec. → link is broken

routed - app. level program.
UDP
↳ access to forward table in O.S.