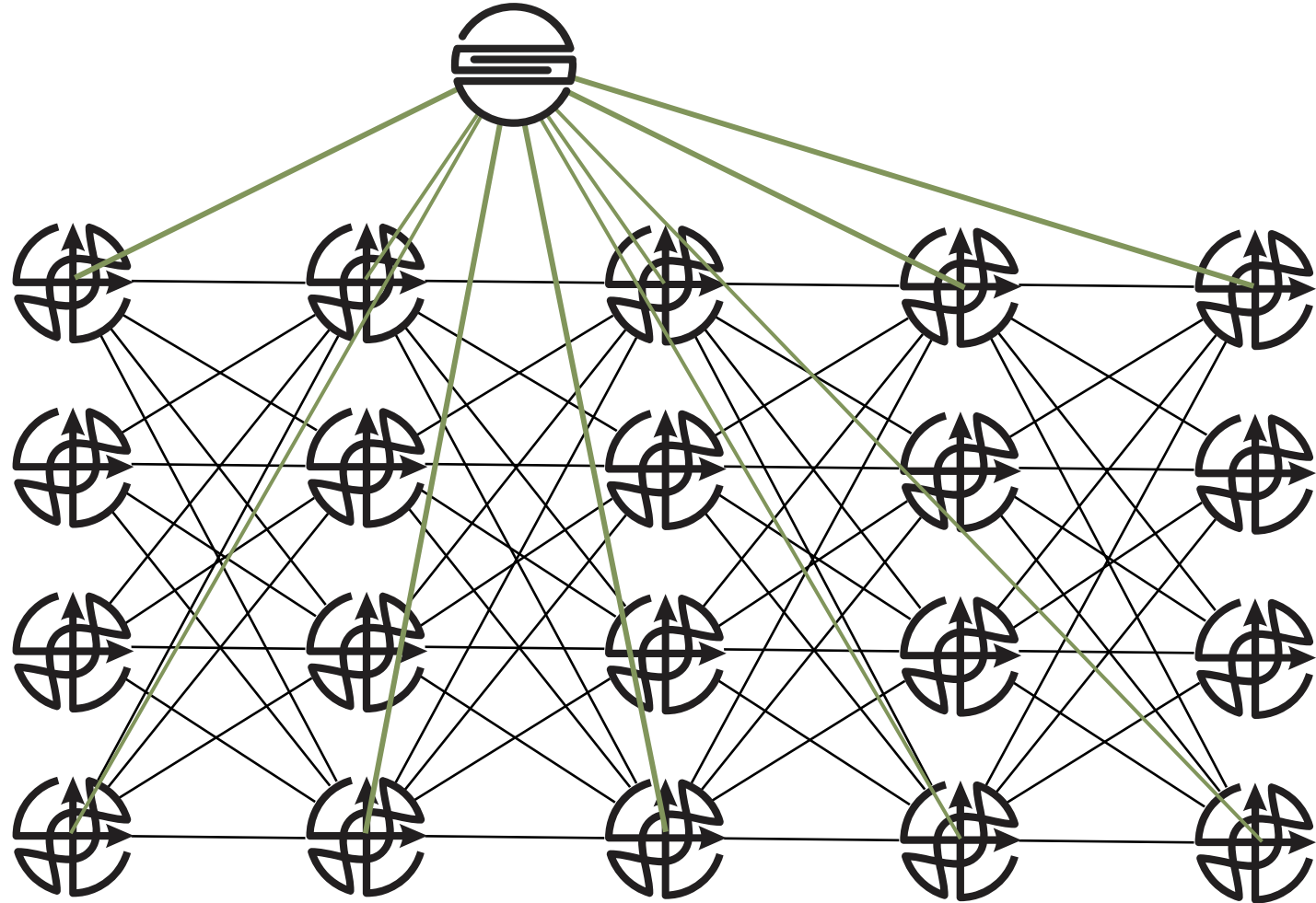


openfabric

Russ White, LinkedIn

Components

- distributed control plane
reachability
topology
- controller based overlay
policy

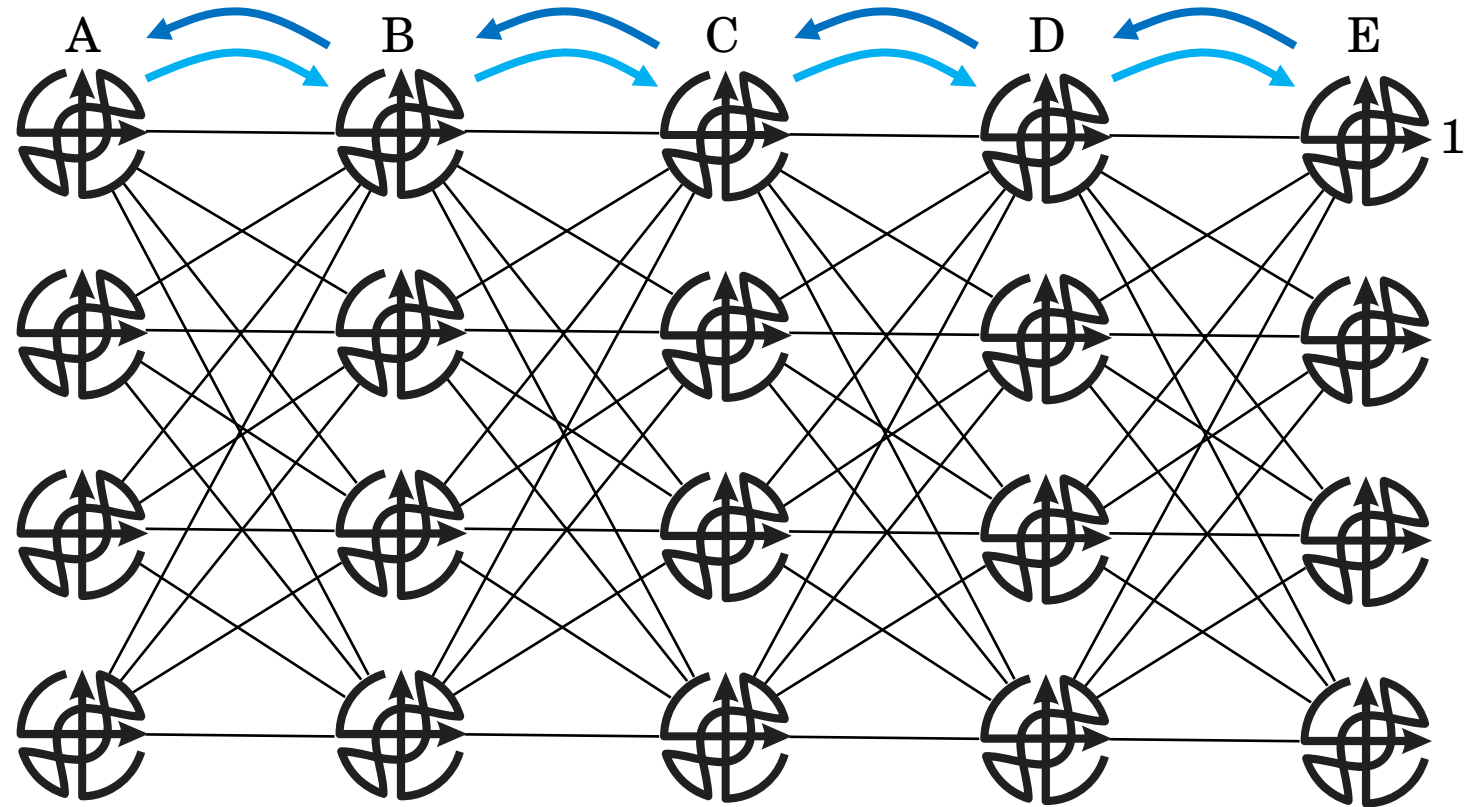


Distributed Protocol Goal

- Build the *simplest possible* distributed link state protocol
- *No policy*
 - Just carry reachability and topology
- *No configuration*
 - All configuration possible is “ephemeral”
- *No “extra stuff”*
 - Feature creep is a *real* problem at scale

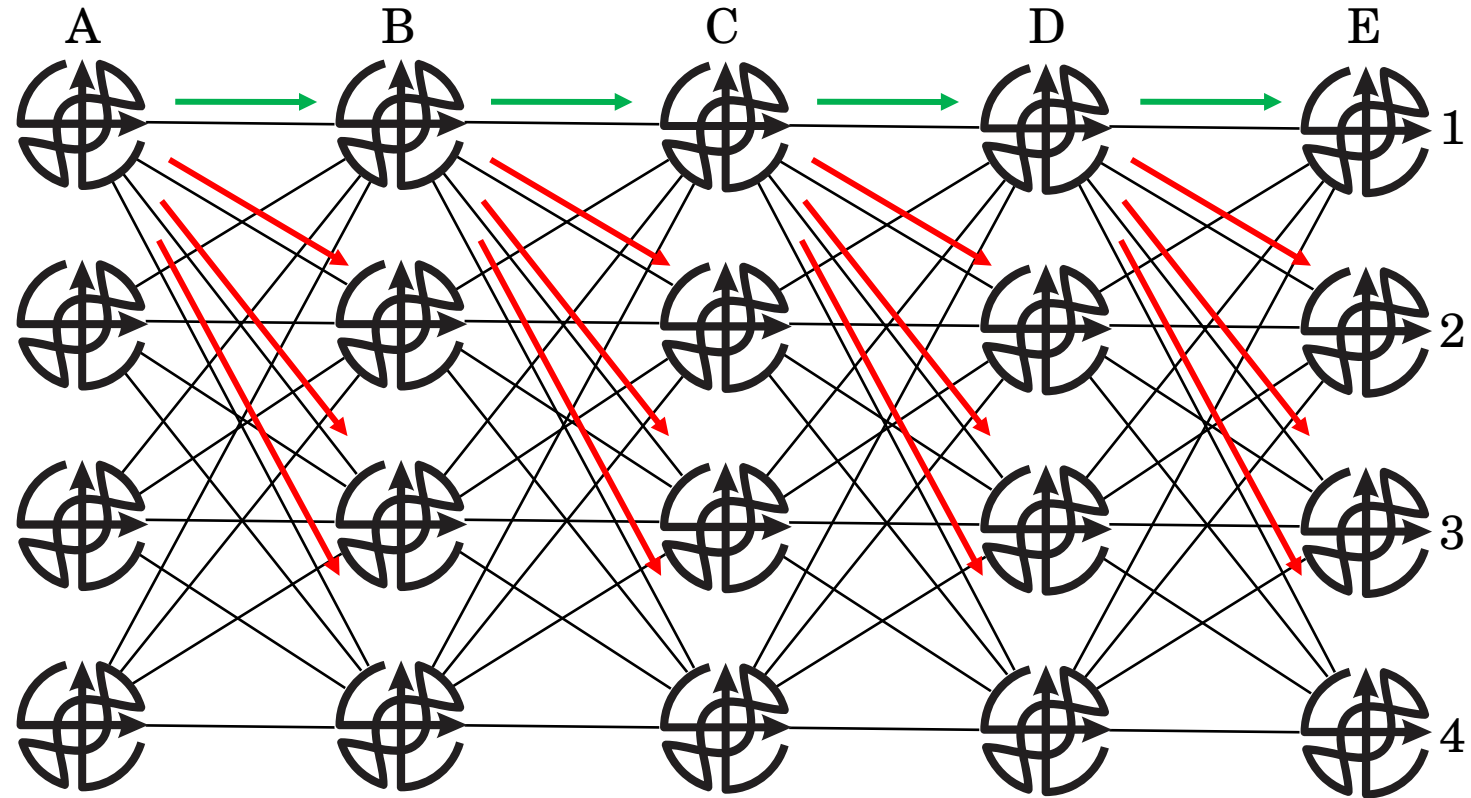
Fabric Location

- hop count == spf with all metrics set to 1
- x = max hop count
- y = max path from someone max path away
- location == $y - x$
- *does not work in >3 stage fabrics*
- *but—these can be manually configured*



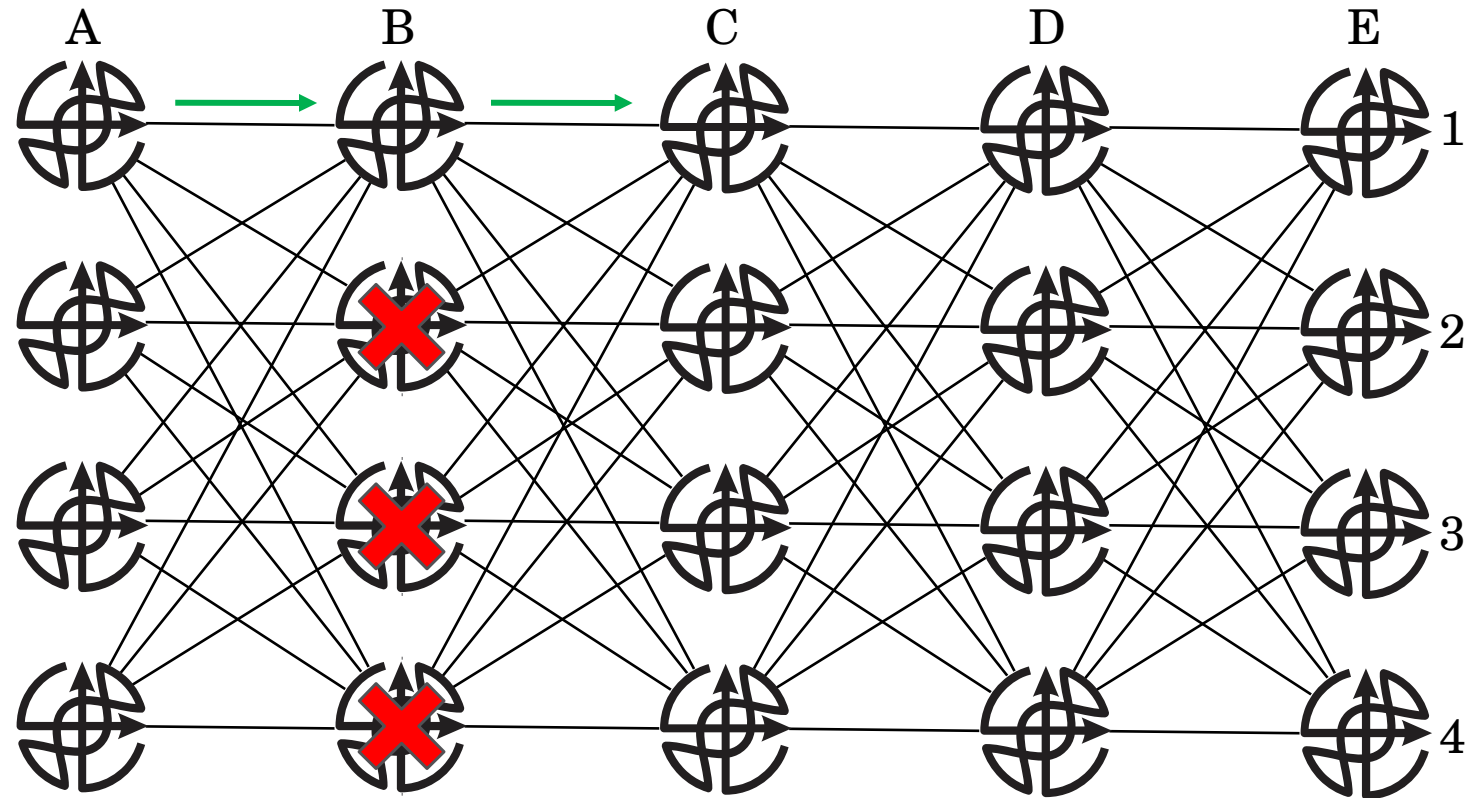
Forward Optimization

- A1 runs SPF
- C1-4, A2-4 are two hop neighbors
- B1 chosen as flooder
- Flooded to B1 on normal MAC address
- Flooded to remainder of neighbors on DNR MAC address



Reverse Optimization

- do not flood to any neighbor on *any* shortest path towards the originator



Other Optimizations

- Remove lots of stuff we don't need/don't care about from IS-IS
- Some optimized neighbor formation "stuff"

Next Steps

- ???