is-is support for openfabric
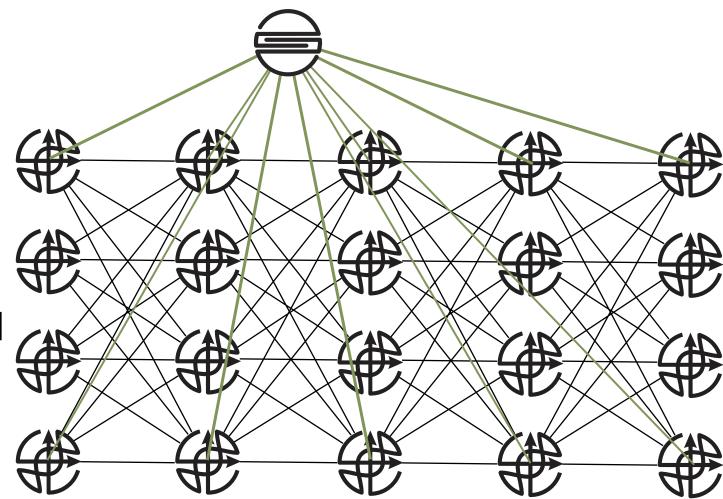
Russ White, LinkedIn

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"
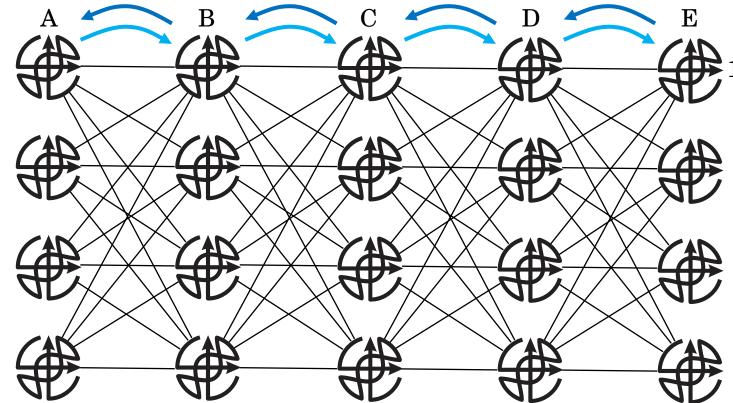 - Feature creep is a *real* problem at scale

Loose Feature Set

- There has been some concern expressed about the loose set of "MAY remove" features

- This is something we would like feedback on
  - Should the list be split into "MAY" and "MUST" remove with an eye to interoperability?
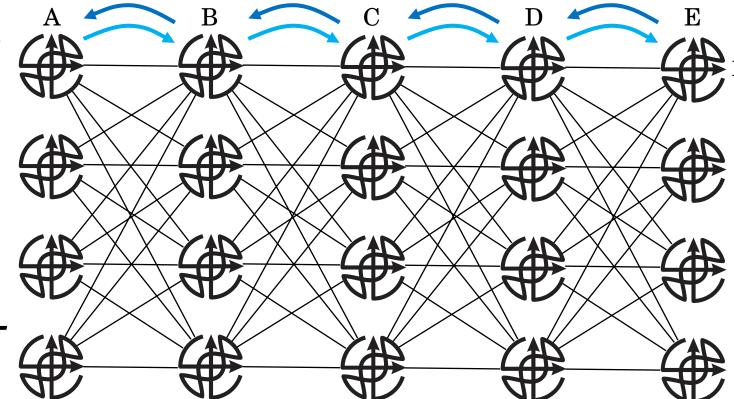
Fabric Location

- hop count == spf with all metrics set to 1
- x = max hop count
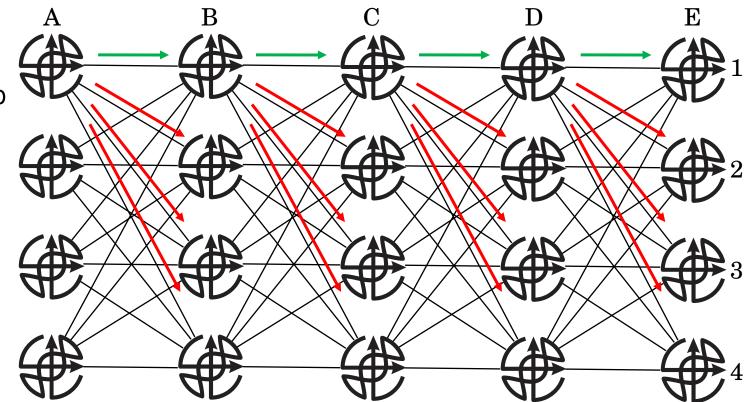- y = max path from someone max path away
- location == $y - x$

Fabric Location

- *does not work in >3 stage fabrics, but these can be manually configured*

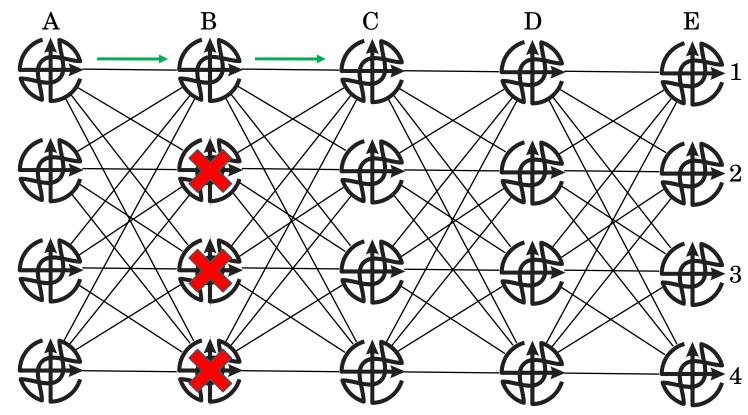- ***Advertised in tier TLV from shen-isis-spine-leaf-ext***

Forward Optimization

- A1 runs SPF

- C1-4, A2-4 are two hop neighbors

- B1 chosen as flooder

- Flooded to B1 in normal LSP

- **Flooded to others in link local LSP (RFC7356)**

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

- ???