

is-is support for openfabric

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Goals

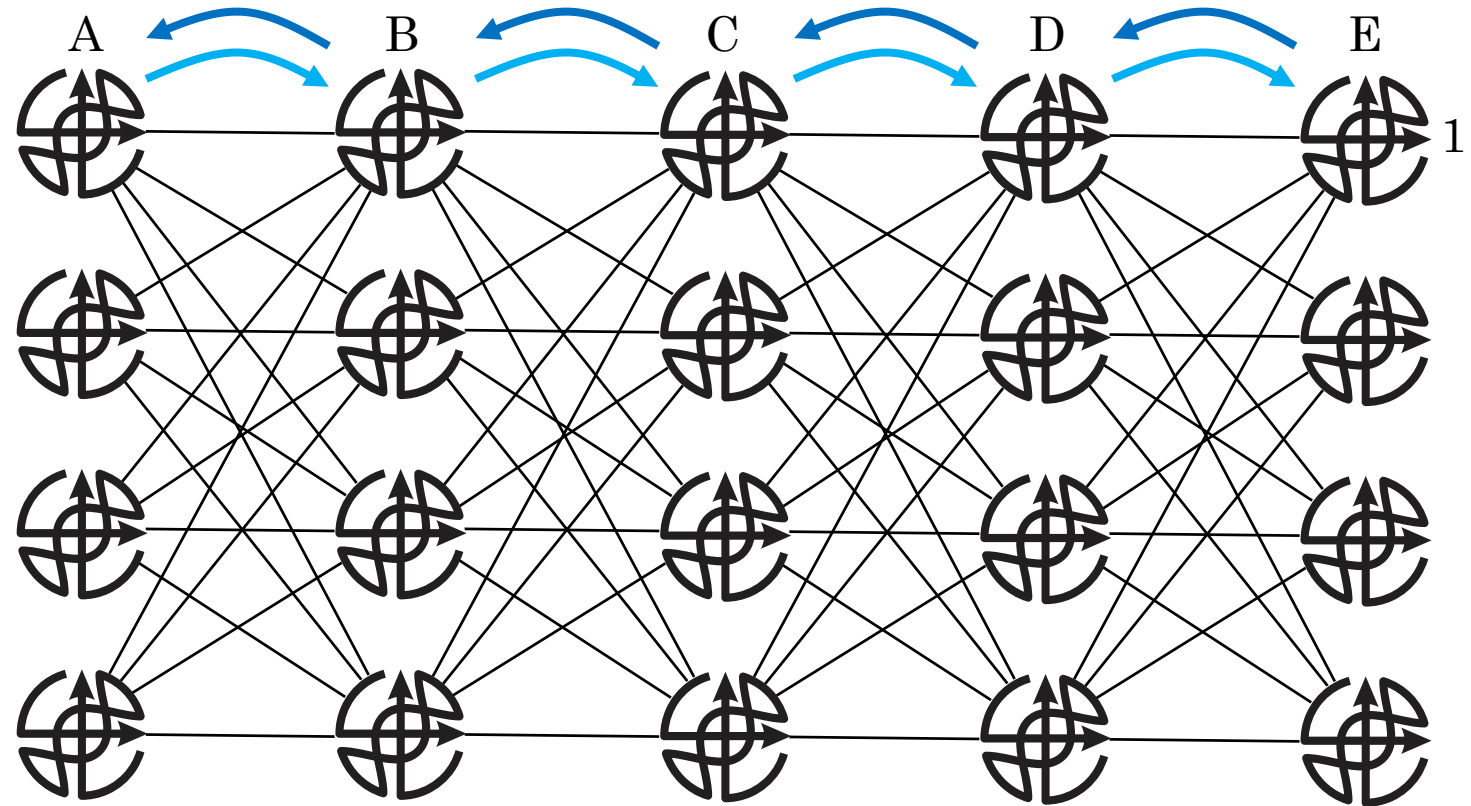
- Build the *simplest possible* distributed link state protocol
- *No policy*
 - Just carry reachability and topology
- *No configuration*
 - All configuration possible is “ephemeral”
- *No “extra stuff”*
 - Feature creep is a *real* problem at scale

Changes Since the Last Draft

- Many minor changes
- The one major change is the way fabric location is calculated
 - Many different algorithms are possible
 - Most only work in one topology, however
 - The current algorithm works in every spine and leaf topology we can think of

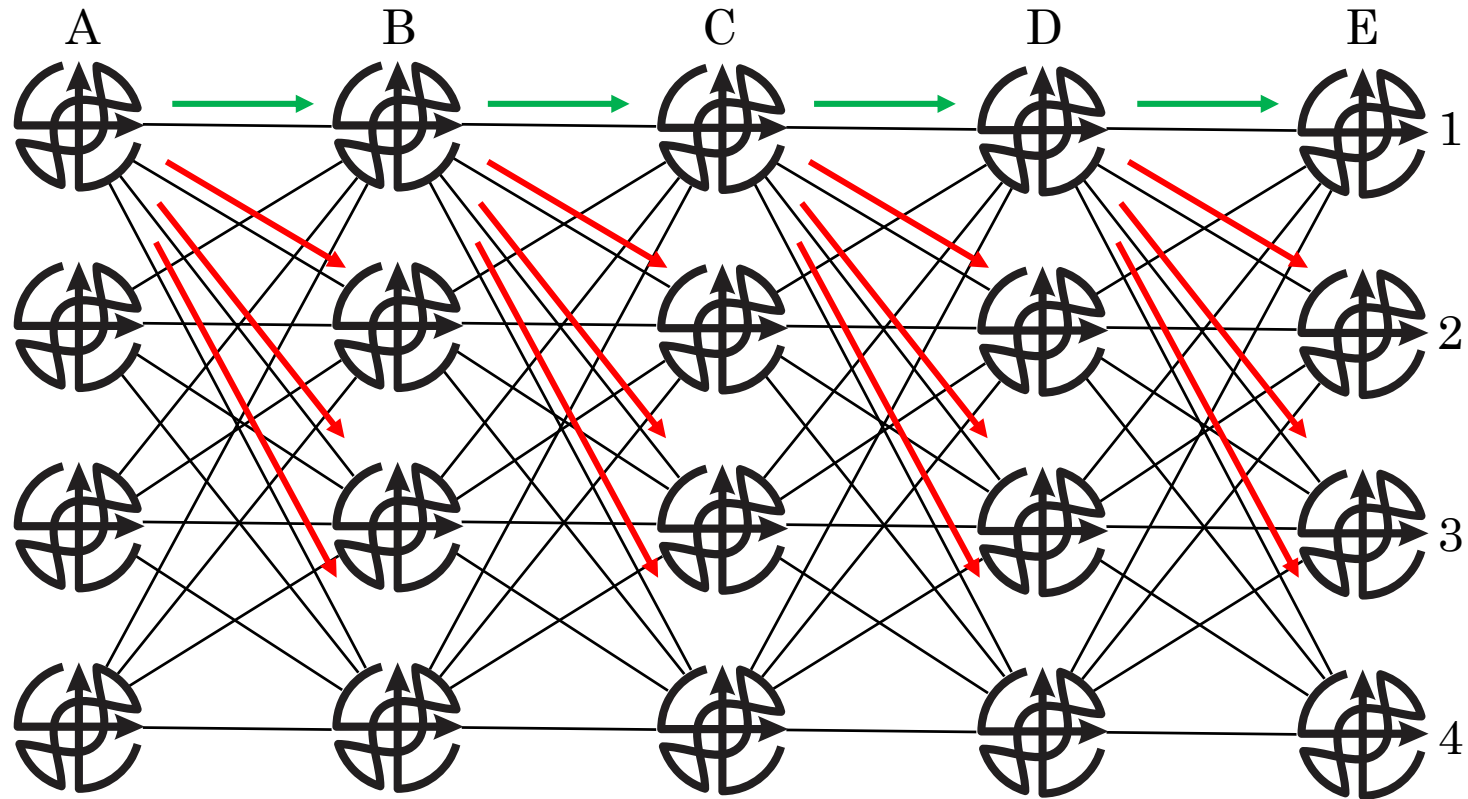
Fabric Location

- Calculate hop count to farthest marked T0
- Calculate hop count from farthest T0 to another farthest T0
- location == difference between these two
- ***Advertised in tier TLV from shen-isis-spine-leaf-ext***



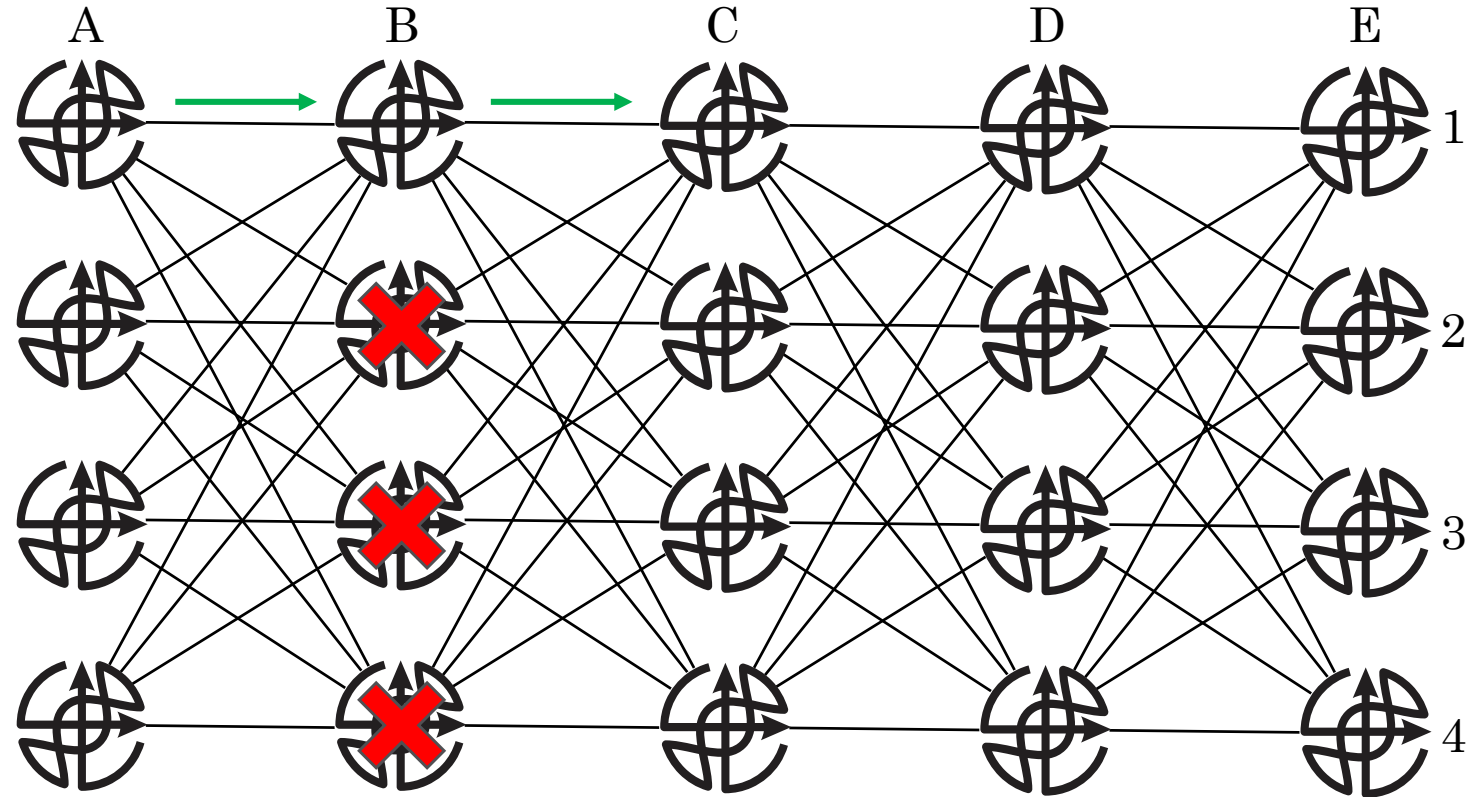
Forward Optimization

- 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"

Current State

- Implementation in Free Range Routing is in progress
 - In “acceptance test” phase
 - Will report on list if/when this becomes generally available
- Testing includes
 - Functional
 - Scale

Next Steps

- Need
 - Use case draft and/or use case appendix in current draft
 - YANG model modifications
 - Other implementations
- Would like to see this accepted as experimental WG item