openfabric
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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

• ???