is-is support for openfabric

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Goals & Components

• Separate reachability from policy
• Minimize/eliminate configuration
• Link State
• Optimize Convergence
• Optimize Scale

• Separate complexity from complexity
  • Topology & policy are complex
• Distributed Control Plane
• Controller based policy overlay
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
- \( x \) = hop count to someone who is T0
- \( y \) = max path from the perspective of someone who is T0
- location == \( y - x \)
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
Once you know your location...

• Connect to controller
  • Either point to point or pub/sub

• Request services based on location

• Receive policy as needed
  • Through whatever southbound interface we eventually choose
Current Status

• Working on an initial implementation

• Further updates to current drafts in the queue
  • We have received a lot of help from the community
  • See the contributor list
  • Thanks!