Root initiated routing state in RPL

draft-ietf-roll-dao-projection

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Presenter: Pascal Thubert, remote.
The RPL Track: A DODAG rooted at Ingress

Non-Storing mode
P-DAO for L1 Targets = \{Ti\}

P-DAO Ack

P-DAO Ack

Storing mode
P-DAO for S1 Targets = \{E\}

Ingress I

Root

Relay A

Fwd node F

Another Track

Relay B

Fwd node G

Egress E

Target Tn

Target \(Tx\)

Segments

S1 = A=>F=>G to E , S2 = I=>H to B

L1 = I->A->E to \{Ti\} , L2 = I->B->E to \{Ti\} , L3 = I->A->B->E to \{Ti\}

Segments

SubTracks

Any Set \(\subset\) \{L1, L2, L3\} but \{\}
Status of the draft

-> 23: Li’s review, first round with questions left opened
   Clarifications
   Introducing P-DAO ACK
   Introducing the bidirectional flag in Sibling Info Option (SIO)

-> 24: More of Li’s review, treated as GitHub issues
   Allows more than one target options, will reach 1\textsuperscript{st} + undefined subset.
   Use of the bidirectional flag in Sibling Info Option (SIO) / what if dup
   Michael’s edits on Amends and Extends. Michael becomes co-author

-> 25: Rephrasing terminology on Legs and SubTracks
   Legs are loose hop sequences from Track Ingress to Egress
   SubTracks (of a Track) are collections of Legs of the Track
Status of the draft (cont.)

-> 26 Remous-Aris’ review, intense but mostly cleanup

-> 27 Dominique’s review
  • Lacking text about SIO in RPL multicast DAO
  • Used to discover relaying neighbor for 2-hops P2P
  • Also this AMENDS RFC 6550 section 9.10
  • 2-hops via a common Sibling is loop less
  • A Cisco related IPR to be declared
-> 27 Dominique’s review: discussion on **Loop avoidance**

- Need a strict precedence (A uses B => B cannot use A)
- Missing clear order of both **precedence** and **preference**
- Proposed when forwarding along a Track:
  - direct 1 hop > Via common neighbor > Segment > Track > drop
- Note: fwd along Segment is only direct 1 hop
  Allows Via common neighbor? would respect the precedence
Next

• Publication request?