RPL-Observations

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Updates

• Added clarification with respect to “Trickle timer reset”
• Backward Compatibility issues with new RPL Control Options
### DAO-ACK handling

- Briefly the problem
  - DAO-ACK is local in case of storing MOP
  - Target not aware of E2E path establishment
  - If an intermediate-6LR returns -ve DAO-ACK status, target is not informed of it.
Proposition (draft-jadhav-roll-storing-rootack)

TIO = Transit Information Option
Proposition (draft-jadhav-roll-storing-rootack)

- Root sends the DAO-ACK back “directly” to target
  - Target sets a flag in TIO to indicate Root to do this.
- Address of target in Target Option
- Root sends TIO option in DAO-ACK
  - TIO needed for PathSequence
  - Overall, just 1-bit change in TIO

TIO = Transit Information Option
Following points are considered

• Handling Target aggregation in DAO
• Handling multiple DAOs in progress with different PathSequence
• Handling prefixes in Target Option
  • How would a root know the Target address when the Target Option contains prefix?
• What happens if a intermediate-6LR sends a -ve status in DAO-ACK?
• Handling multiple preferred parents
• Runtime memory efficiency
• Incremental update possible: Root and subset of nodes can be upgraded.
Next Steps

• What’s the plan?
  • DAO-ACK ... New draft in progress

• Not sure how to organize
  • DTSN handling ... best practices draft?
  • Path control bits, lollipop counters (seq-window size recommendations, restart handling, worst case scenarios)
  • Should we extend the current observations draft itself?
  • Or a new draft with all combined?