

TRILL OAM

draft-tissa-trill-oam-03

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by

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Fundamental Model

- At Taipei we discussed details of various payloads and messages.
- Considerable discussion has since occurred in the mailing list as well.
- Highlighted in the next slide is the Fundamental Model for TRILL OAM messages to emphasis importance of different elements.

Fundamental Model for TRILL OAM Messages

TRILL Header

- o) Provide Hop-by-Hop Routing

Diagnostics Payload

- o) Mimic the forwarding of real data
- o) ECMP selection for unicast or Pruning for Multicast
- o) Need to include both IP and Non IP

Embedded Message Channel

- o) Allow to differentiate between **OAM messages and Real data experiencing errors**
- o) Allow to communicate additional information e.g. **sequence#**, scope in multicast, upstream/downstream info, OAM payload discovery, error notification etc.
- o) allow out of band communication, uni directional fault identification

Major Changes since 82nd IETF

- Added Payload discovery for ECMP hashing, similar to RFC 4379
 - Allow to discover payloads for ECMP path coverage
- Added Traffic Triggered Monitoring to facilitate Live data troubleshooting and monitoring
 - Allow monitoring flows and/or troubleshoot flow based faults
- Mailing list discussion on using *UDP based messaging channel akin to RFC 4379* vs. *ICMP based message channel similar to RFC 4884*

Important OAM requirements

- Ability to troubleshoot and monitor unicast and multicast
 - ECMP coverage
 - Multicast pruning
 - For both IP and Non IP flows
- OAM payloads SHOULD NOT
 - Leak outside TRILL networks
 - Increment invalid packet counts etc.
- Ability to not only detect connectivity faults but also need to have ability to monitor performance, fault notification, liveness monitoring etc.
- Extensible
- Re-use existing technologies where possible/applicable

Questions and Next Steps

- Seek WG comments on
 - OAM Message model
 - Encap order and importance of the blocks
 - (TRILL HDR + Diagnostic Payload + Message channel)
 - Do it right, do it once, make it extensible
- Questions ?
- Next Steps ?