

# TRILL OAM Task Force Report

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# Goal

- Identify TRILL OAM Requirements
- Agree on OAM Message format
- Agree on Critical set of Tools

# Accomplishments and Next Steps

- Accomplishments
  - Agreed on Requirements
    - Identified MUST, SHOULD and Nice to Have
  - Agreed on Message Structure
- Next Steps
  - Define the Message Format
  - Identify MUST have tools
  - Details of MUST have tools
  - Publish above for comments and feedback
  - Time-lines
    - 2 to 2.5 months for Publication to be available for comments and feedback

# Requirements (MUST)

- Unicast: Ability to Detect (test) connectivity between two RBridges either generic or per flow basis
- Unicast: Ability to Detect (test) connectivity between two RBridges through a specified path either generic or per flow basis.
- Unicast: Ability to Trace path(s) between two RBridges RB1 and RB2
- Multicast: Ability to verify connectivity per tree basis (unpruned tree verification)
- Multicast: Ability to Limit the scope to interest RBridges
- Multicast: Per flow connectivity verification (Pruned tree verification)

# Requirements (MUST)

- RBridges MUST have ability to differentiate between OAM messages and data (non OAM messages)
- Allow to have multiple concurrent OAM sessions between any given two RBridges
- Connectivity and liveness monitoring OAM messages follow the same path as the data
- OAM messages MUST NOT need extension to TRILL header
- OAM framework be Extensible to include Nice to have features
- Single OAM framework for TRILL
- Maintain OAM counters

# Requirements (SHOULD)

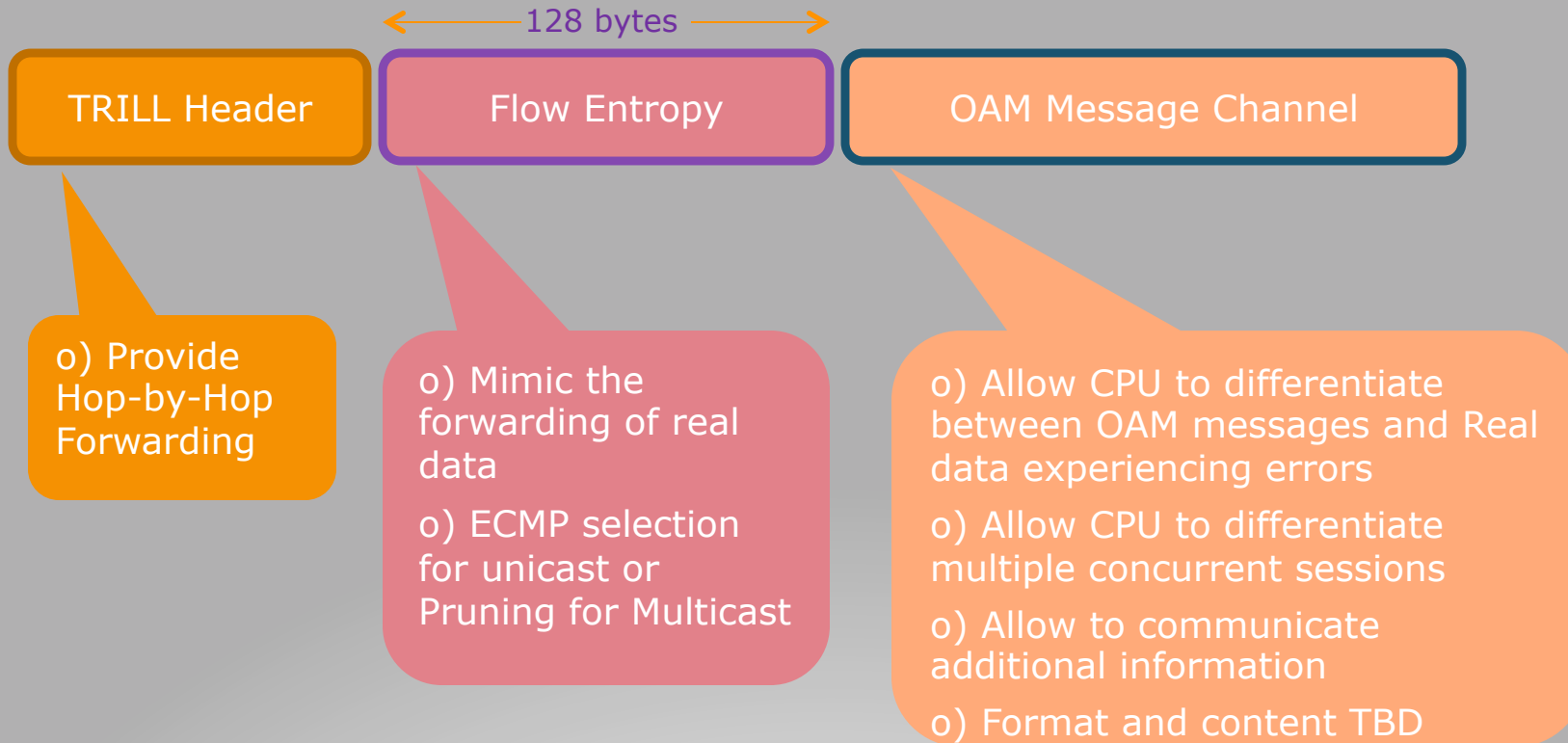
- Unicast: Ability to discover all possible paths between RB1 and RB2.
- Unicast: Ability to test connectivity of a specific path between RB1 and RB2.
- Ability to Monitor Liveliness (continuity) between two RBridges RB1 and RB2. (All intermediate RBridges MUST support transit requirements)
- Ability to Monitor Liveliness (continuity) of all paths between RBridges RB1 and RB2.
- Unicast: Ability to Trace path(s) between two RBridges RB1 and RB2 from an intermediate RBridge RB3
- Unicast: Ability to Detect (test) connectivity between two RBridges RB1 and RB2 from an intermediate RBridge RB3
- MCAST: Ability to verify Liveliness (continuity) per flow basis
- OAM SHOULD NOT trigger Errors on end devices
- Contain Fault indication
- Contain Defect notification

# Nice to Have

- Performance Monitoring
- Loss, delay and throughput measurements
- Ability to specify Out of Band, in-band or no response modes for OAM messages
- Live traffic monitoring
- Ability to verify control plane and data plane consistency
- Ability measure ECMP utilization



# OAM Message Structure



**Q&A**