An approach for unified LAN edge
(draft-hu-trill-pseudonode-nickname-03)

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Motivation

- Provide active-active forwarding for multi-homed pt-pt LAN edge
- Unified framework for shared LAN and multi-homed pt-pt LAN edge
- Receive and Transmit, both TRILL and native frames
- Detects configuration errors on multi-homed pt-pt LAN edge
- Resilience under various failure conditions.
- Avoid MAC flip-flop (MAC moves) on active-active edge.
Framework

- Utilize the Appointed Forwarder mechanism presented in RFC6325
- Utilize methods presented in the CMT draft (draft-ietf-trill-cmt)
- ESADI to synchronize address learning across Shared LAN edge,
- Combination of the above create the unified Framework
Theory of Operations

- TRILL LAN Hellos are enabled on each LAN edge port.
- Group of RBridges that interface with the LAN edge is represented by single virtual nickname, aka pseudo-nickname.
- All native frames ingress from the LAN edge has pseudo-nickname as the ingress nickname.
ESADI synch MAC across RB1..RB3

• TRILL LAN Hellos are not forwarded back to the LAG
• Hence Each interface have separate AF
ESADI synch MAC across RB1...RB3

TRILL LAN HELLOS

• TRILL LAN Hellos are forwarded back to other interface
  • Fall back to active-stand-by forwarding with single AF (RFC6325)

NO LAG configured
Theory of Operation (configuration Error – cross connect)

- TRILL LAN Hellos are seen by RB1-RB3
- Fall back to active-standby selecting single AF (RFC6325)
• RB1 – CE1 link failed
• Packets arrived due to ECMP on RBv
• RB1 unciast forward to RB2 or RB3 based scheme
The Theory of Operation (Link Failure-multicast)

- CMT draft provide solution for Northbound traffic.
- RB4 can select any tree to forward traffic.
- Only One of the RB1-RB3 should forward to CE1.

Each LAG is identified by a unique-ID.
- One of the RB (1-3) is responsible for forwarding to CE1 per tree.
- In this case RB2 forward.
- Propose to use ESADI to advertise \{RBx RBv,LAGID\} binding.

TRILL LAN HELLOS

Tree T1

ESADI synch MAC across RB1..RB3
There are 3 kinds of LAG membership information needed to be propagated.

- Each member RB announce on behalf of RBv
  - All member LAGs
  - Withdrawal LAG/LAGs
  - Add LAG/LAGs

We can implement this either as a separate ISIS sub-TLV under router capability (OR)

We can implement as part of the ESADI framework

Any preferences?
Next Steps

- Move to WG status