TRILL RBridge VRRP

draft-hu-trill-rbridge-vrrp-00.txt

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Motivation

- BRB becomes bottleneck
- The TRILL Campus exits a single point of failure
Motivation

- BRB2 backup BRB1
- If BRB1 becomes unavailable, BRB2 replaces BRB1, but the switching time is up to the ISIS routing convergence time
- Introduce and extend the VRRP technology in BRB, configure BRB1 and BRB2 as one VRRP group
TRILL RBridge VRRP Scenario

BRB1 (Master BRB) -> Nickname 1

Virtual Nickname

LSP Flood (virtual Nickname)

BRB2 (Backup BRB) -> Nickname 2

RB1 -> RB2 -> RB3 -> RB4

BRB: Border RBridge
RB: RBridge
IS-IS Adjacency

• **Master RBridge:**
  - setup and maintain all the adjacencies with other R Bridges except backup RBridge.

• **Backup RBridge:**
  - receives the other R Bridges hello packets and IS-IS packets (such as LSP, CSNP, PSNP) besides master RBridge
  - not send any hello and IS-IS packets (LSP, CSNP, PSNP) to other R Bridges
VRRP Frame Format

Outer Ethernet Header:

- TRILL-VRRP Multicast Address
- TRILL-VRRP continued
- Source RBridge MAC Address
- Source RBridge MAC Address continued
- Ethertype = C-Tag [802.1Q]
- Outer.VLAN Tag Information
- L2-TRILL-VRRP Ethertype

VRRP for TRILL Payload:

- TRILL VRRP Payload

Frame Check Sequence:

- PCS (Frame Check Sequence)
VRRP Payload

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<th>Type</th>
<th>Virtual RB ID</th>
<th>Priority</th>
<th>Count Nicknames</th>
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Next Steps

- Comments and feedback from TRILL group
Q&A

Thanks!