TRILL IS-IS MTU Negotiation

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Dependence on campus-wide Sz

• Link MTU size $\geq$ campus-wide Sz
  – MTU size is a property of link, not a campus.
  – It SHOULD not be related to a global value.

• CSNP/PSNP $\leq$ campus-wide Sz
  – These PDUs are exchanged only on a local link.
  – But, their sizes are improperly restricted by a global value now.

• The global dependence is problematic.
Global Dependence, Example 1

- RB4 leaves the campus, and its LSPs ages out, the campus-wide Sz will increase from 1600 to 1800.
- The adjacency between RB2 and RB3 changes to 2-way!
- The state of an adjacency can be determined by a remote adjacency. It can be confusing to operators.
Global Dependence, Example 2

- Wrong configuration at RB3: Sz > port MTU.
- RB3 operates normally until RB4 leaves and campus-wide Sz becomes 1800.
Puzzling Trouble Shooting

- The root cause of the failure of the connection between RB1 and RB2 maybe the failure of RBx.
The Right Way

• Use it directly for confining the LSP size.
• Do not use the campus-wide Sz in link MTU testing.
• To make the link MTU testing totally a local matter.
Solution To Break the Dependence

• A new value to replace Sz for link MTU testing
  – Lz: Minimum acceptable Inter-RBridge link size on a local link
  – Default, the minimum originatingLSPBufferSize

• Define an MTU testing algorithm
  – Using Lz
Minimum Acceptable Inter-RBridge Link Size: $L_z$

- $L_z$ is used in link MTU size testing and for those link-local PDUs to replace the role of campus-wide $Sz$. 
Link MTU Testing Algorithm

- “Binary Search” is used for link MTU size testing.
- Link MTU is a value between 1470 and Lz.
Traffic MTU Size

• Not confined by Lz or Sz, only confined by the physical port MTU.
• We can use the same testing method as the IS-IS MTU testing algorithm to test the traffic MTU of a link.
Next Step

- Call for WG adoption
Thanks!