

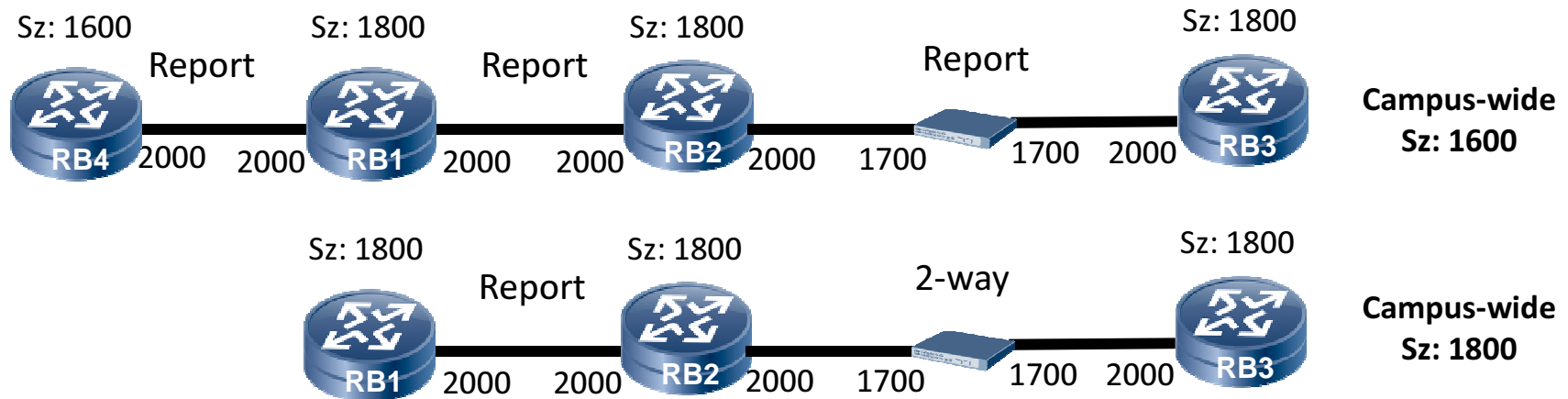
# TRILL IS-IS MTU Negotiation

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# Background

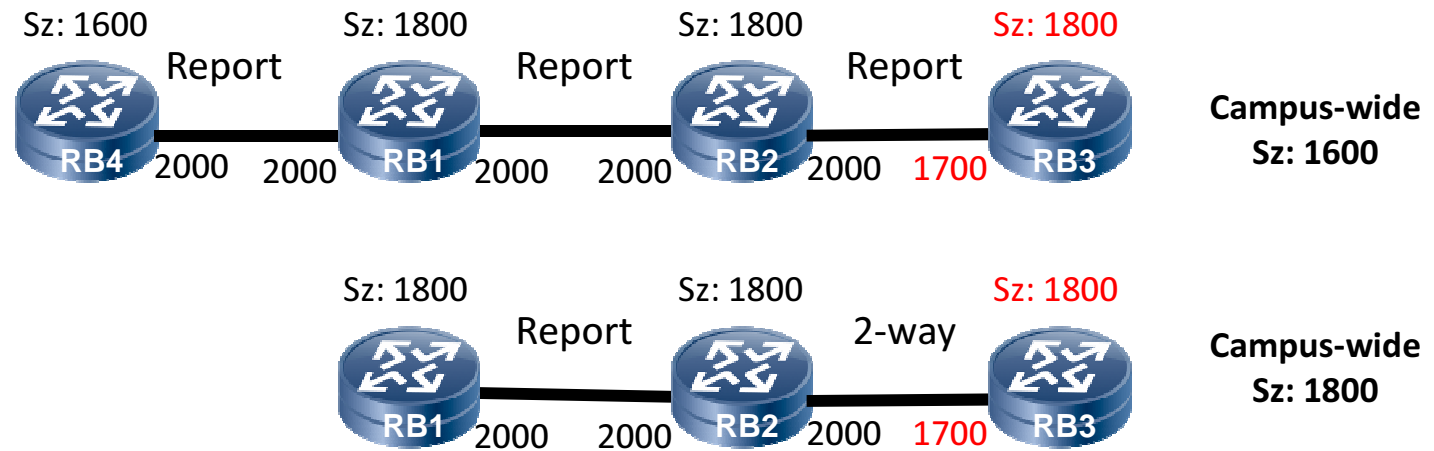
- [RFC6325] Section 4.3.2. Testing Link MTU Size
  - The successful tested link MTU should be greater than the campus-wide Sz.
  - **Local** link MTU size testing depends on a **global** value.
- [draft-eastlake-trill-rbridge-clear-correct-01] amended [RFC6327] : LSP synchronization should start in 2-way state of an adjacency.
  - CSNP/PSNP for LSP database synchronization are exchanged only on a local link rather than broadcasted in the whole campus. The size of these TRILL IS-IS frames should not be restricted by a global value: campus-wide Sz.

# Issue 1: Global dependence



- 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 is undesirable to operators.

# Issue 2: Concealing wrong configuration



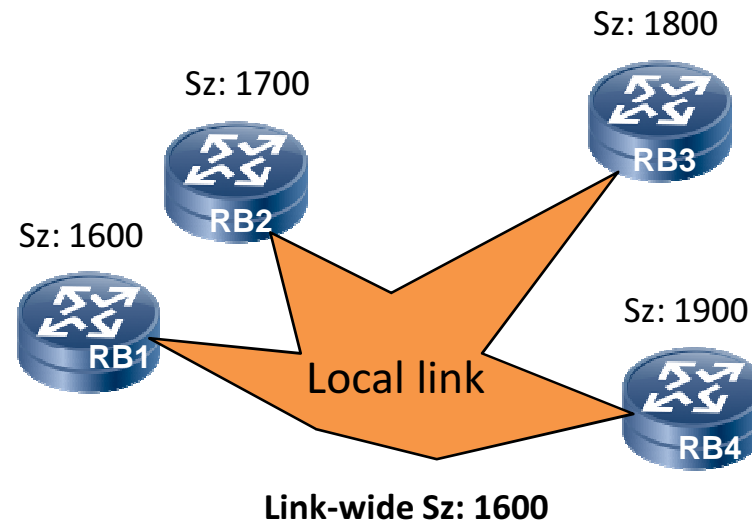
- Wrong configuration at RB3:  $Sz > \text{port MTU}$ .
- RB3 operates normally until RB4 leaves and campus-wide Sz becomes 1800.

# Our Solution

- Introduce a new value
  - Minimum link-wide Sz: Lz
- Define an MTU testing algorithm
  - Based on Binary Search

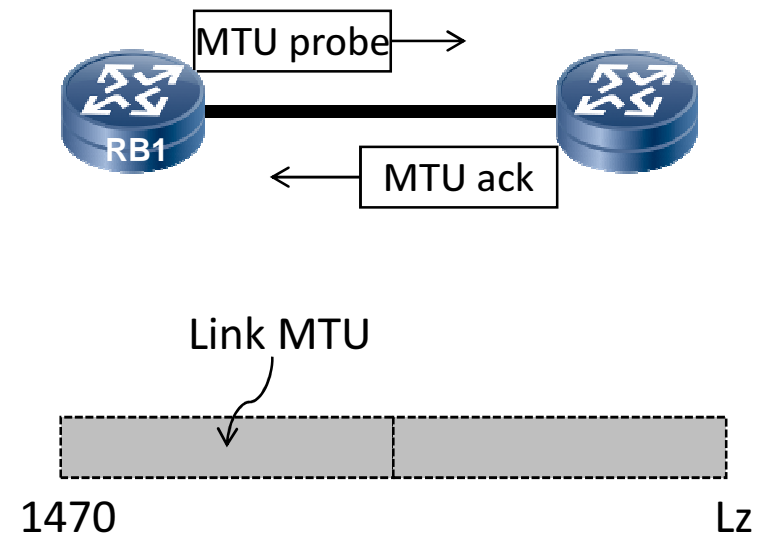
# Minimum Link-wide Sz: Lz

- "Lz" is the minimum Sz of the RBridges on the local link.
- Lz is used in link MTU size testing and confining those one hop effective PDUs to replace the role of campus-wide Sz.



# Link MTU Testing Algorithm

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



# LSP Synchronization

- Clear and Clarification: starts in 2-way
- The maximum size of CSNPs and PSNPs should be confined by Lz rather than campus-wide Sz because they are only exchanged between neighbors instead of the whole campus.
- For all those one hop effective PDUs
  - Before Link MTU is tested: formatted no larger than Lz
  - After Link MTU is tested: no larger than tested link MTU size



# 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.

# Conclusion

- This document introduces a new value “Lz” to replace the role of campus-wide Sz in link MTU testing and confining those one hop effective PDUs.
- An easy-to-follow method is provided for RBridges to negotiate their MTU size.

Thanks!