

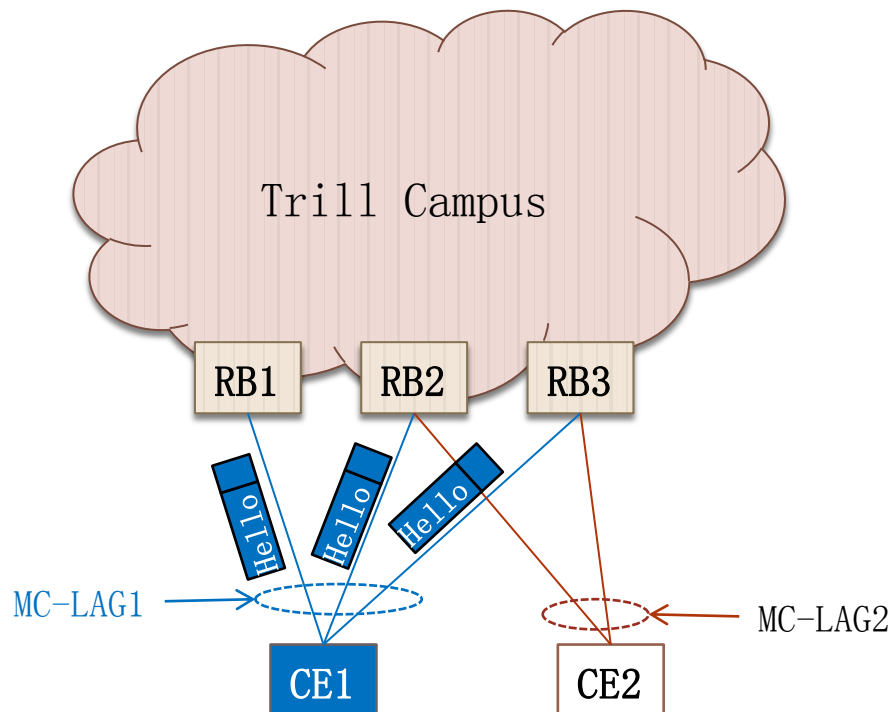
Problems of Active-Active Connection at TRILL edge

draft-yizhou-trill-active-active-connection-prob-00

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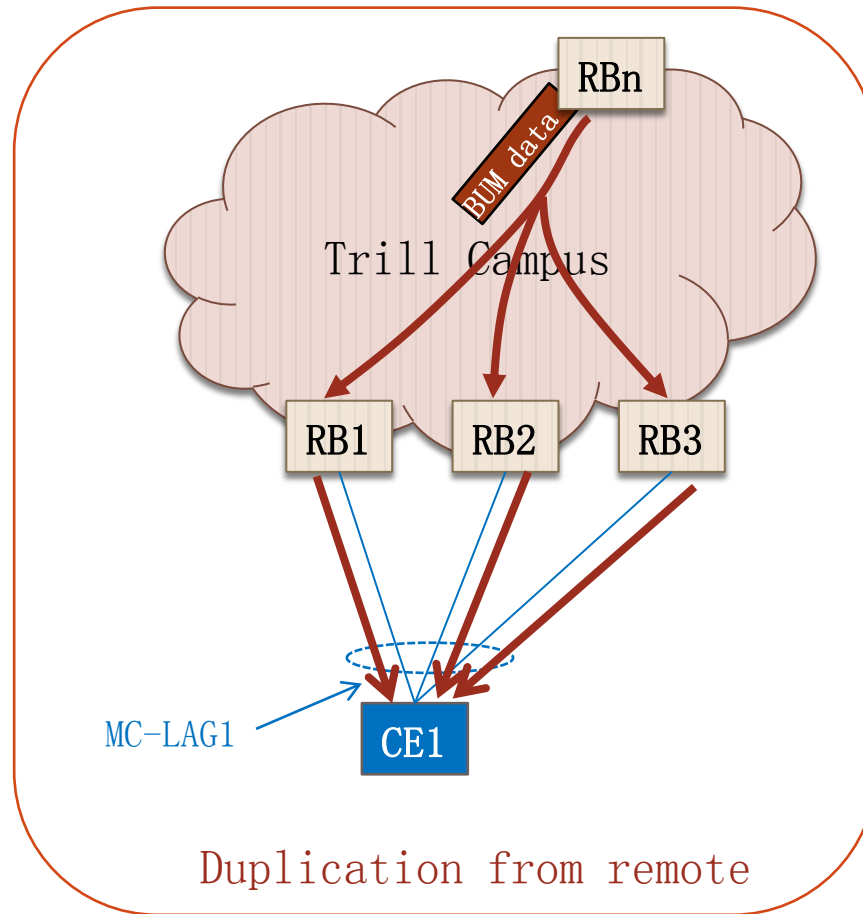
Background and Overview

- Why active-active connection?
 - Flow rather than VLAN based load balancing
 - Rapid failure detection, higher reliability
- Some ongoing drafts trying to solve active-active connection problems. Prefer to have a **high level problem statement** first.

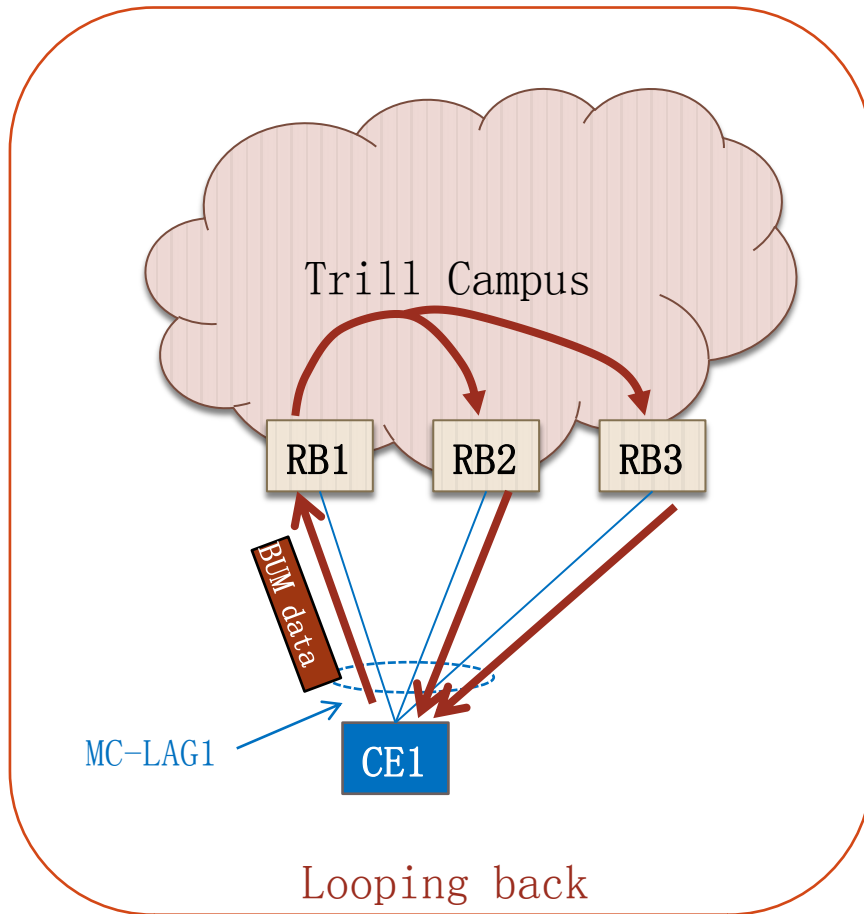


Fundamental issue: No single appointed forwarder elected for edge RBridge group as Hello messages are not received by other member Rbridges

Problem 1: Frame Duplication

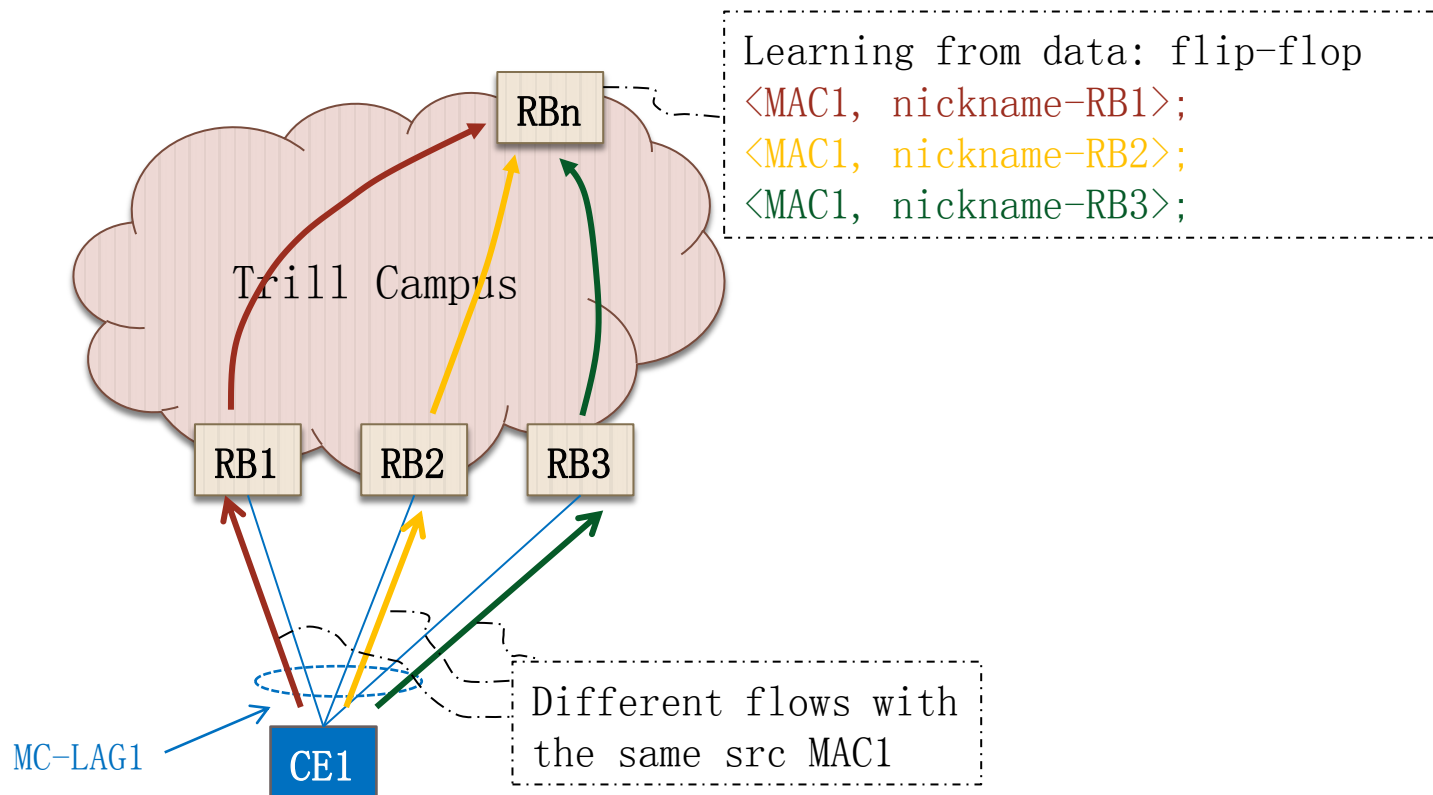


Problem 2: Loop



- Looping back may occur
- MC-LAG is just like a single link. No extra risk of continuous looping.
- Bear in mind that solution should not introduce any continuous looping risk

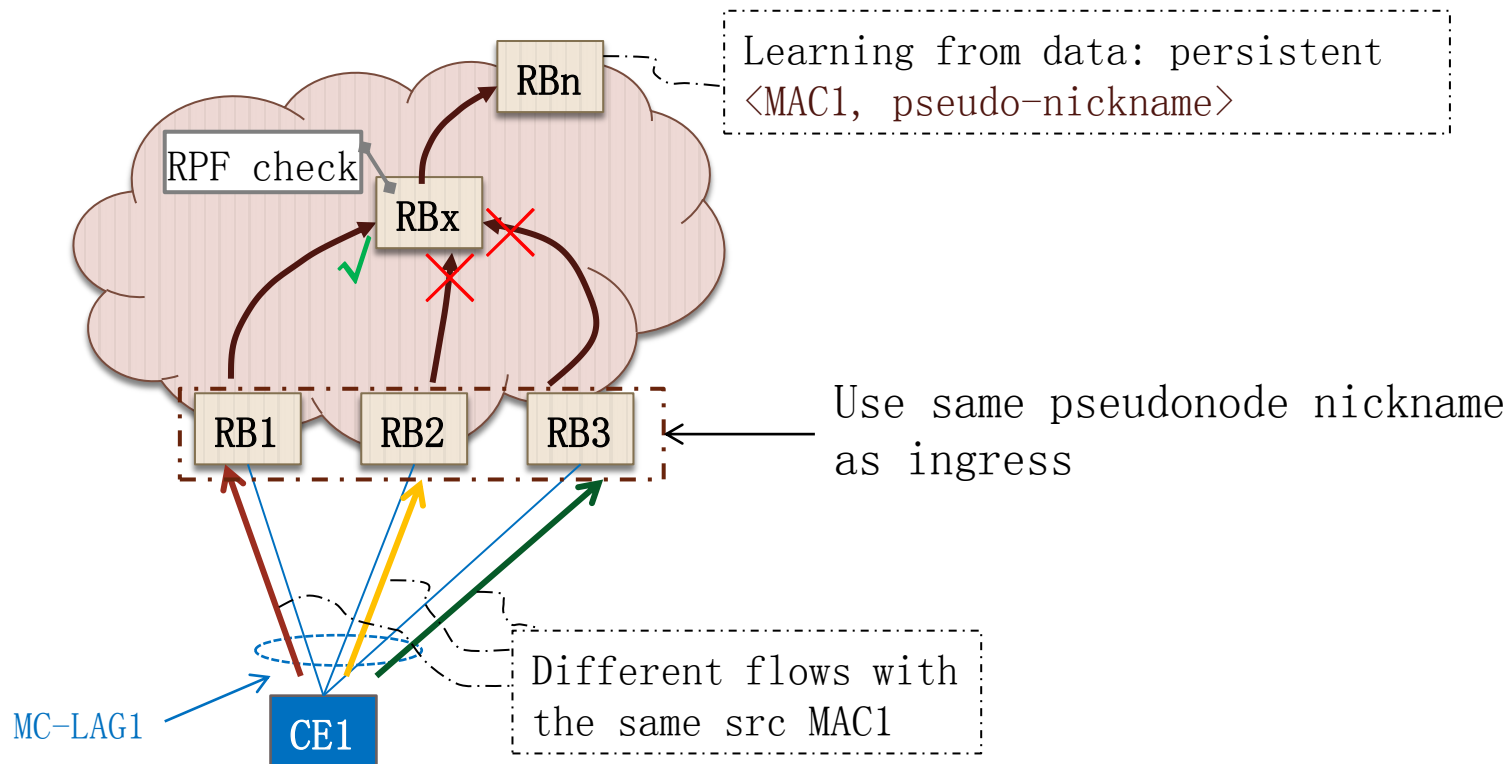
Problem 3: Address Flip-Flop



Address flip-flop may cause:

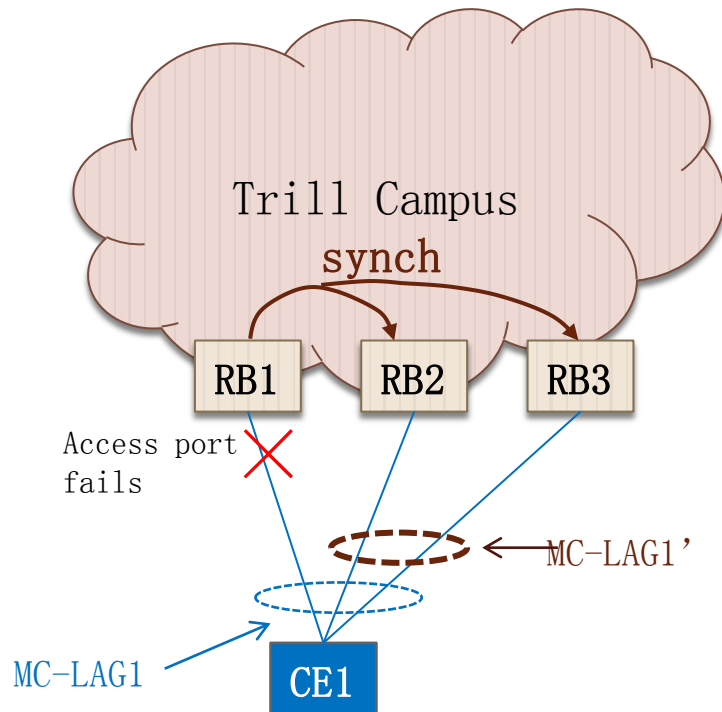
- returning traffic going through diff paths → re-ordering
- some RB mis-interpreting it a severe problem

Problem 4: Drop due to RPF check



Pseudonode nickname was meant to solve previous two problems, however it introduced another issue: dropping due to RPF check on multi-destination data

Problem 5: Info inconsistency



- Manual provisioning inconsistency: may cause frame loss. Auto discovery required?
- Learnt MAC/nickname inconsistency: unnecessary unknown unicast flooding
- Failure state inconsistency: not able to trigger the other member RBs to dynamically adjust (solution dependant)
 - node failure
 - link failure: access port? trunk port?

MC-LAG implementation varies by vendor:

1. If inter-chassis protocol is employed: make sure it can run smoothly over TRILL campus. Need mechanisms for TRILL specific parameters synch.
2. If no inter-chassis protocol available: TRILL should provide synch mechanisms.

Summary and next step

- Current relevant solution drafts: [TRILLPN], [CMT], [TRILLBFD]
- Feedback and comments. Take this draft as the starting point for high level problem statements?