OSPF Flooding Reduction

draft-cc-ospf-flooding-reduction-02

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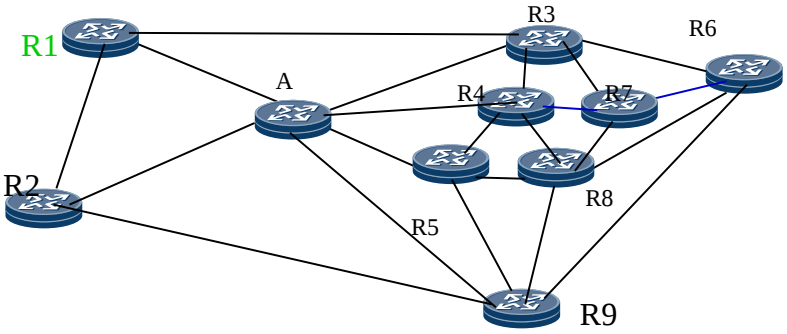
Updates

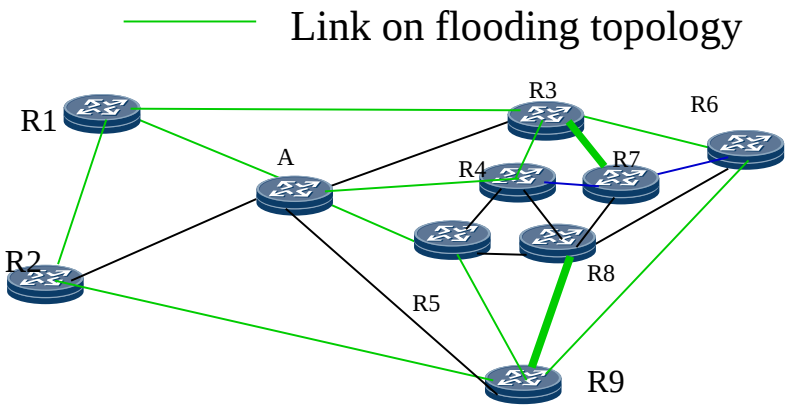
- Link and node failures
  - Issues raised by experts:
    - Break/split flooding topology
    - How to guarantee reliable LS flooding?
  - ✓ Solutions

- Select and switch a mode for flooding topology
  - .00 version:
    - Distributed mode
    - Central mode
    - Static configuration mode
  - ✓ This version:
    - ✓ Select/change a mode
    - ✓ Smoothly switch to a new mode

Solutions for Reliable LS Flooding

- **Critical Interface/Link**
  - interface on the flooding topology and
  - without it, flooding topology is broken/split

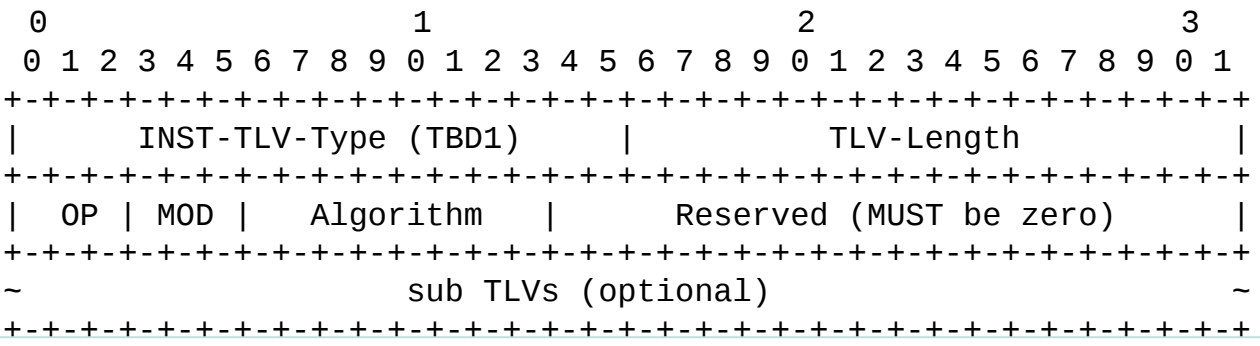




- Critical interface can be determined during/after computing flooding topology
- When critical interface or node down, simply use traditional flooding before new flooding topology is constructed

Select and Switch a Mode

- Flooding Reduction Instruction TLV in RI LSA



OP :

- ✓ 0x001 (R): Perform flooding Reduction
- ✓ 0x010 (N): Roll back to Normal flooding

MOD :

- ◆ 0x001 (C): Central Mode
  1. Select leader, backup leader
  2. Leader computes flooding topology, flooded to all
  3. Every node receives and uses flooding topology
- ◆ 0x010 (D): Distributed Mode

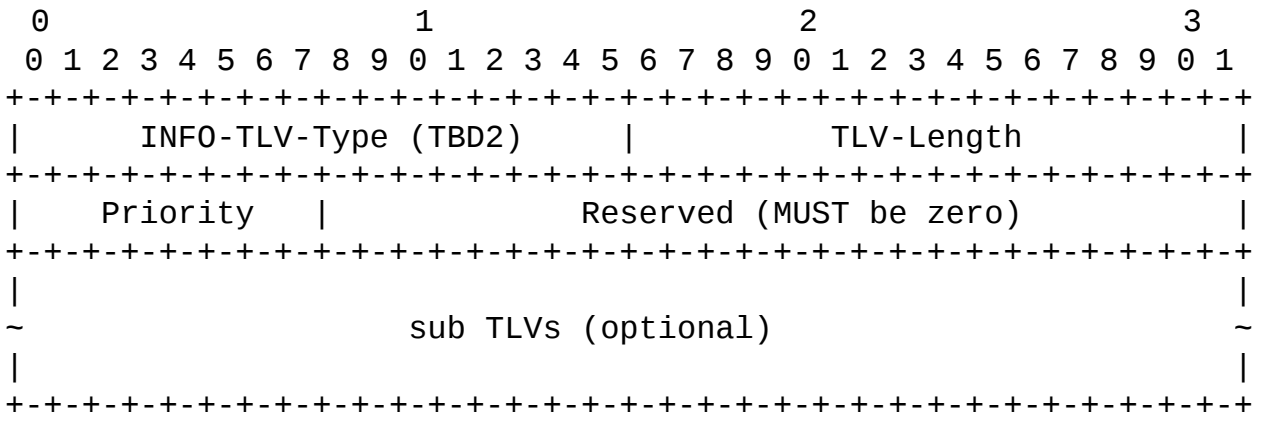
  Every node computes and uses its flooding topology
- ◆ 0x010 (S): Static Mode. Every node uses flooding topology configured

Algorithm :

Indicating an algorithm for computing a flooding topology

Extensions For Central Mode

- Flooding Reduction Information TLV in RI LSA



Priority :

- ✓ indicate priority of node originating TLV to become leader in central mode

Leader sub TLV

Backup Leader sub TLV

Method/Algorithm to select Leader and Backup Leader

Summary

- Addressed Issues on Link and node failures
- Support selecting and switching a mode for flooding topo logy

Next Step

Welcome comments