

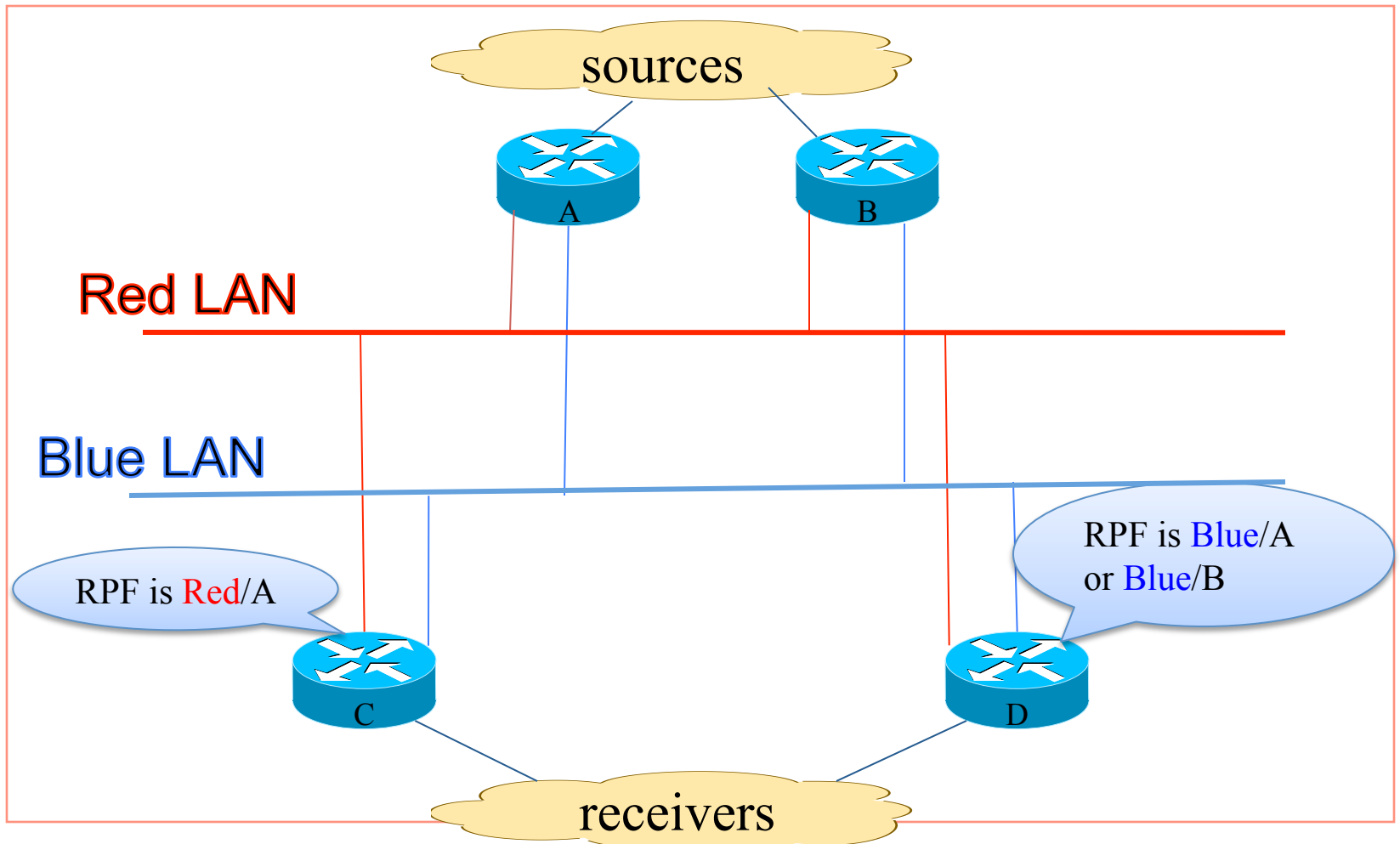
# Agenda

- Overview
- Use Cases
- Design Consideration
- Packet Format
- Open Items
- Questions for the Working Group

# PIM ECMP Assert Overview

- Existing ECMP RPF selection is driven by downstream, using either largest IP address or hash.
  - Lack of administrative choice on path selection
  - No flexibility.
- PIM ECMP Assert is proposed to improve control of RPF path selection.
  - Initiated by upstream routers (similar to Assert)
  - Used to choose a path based on administrative choice.

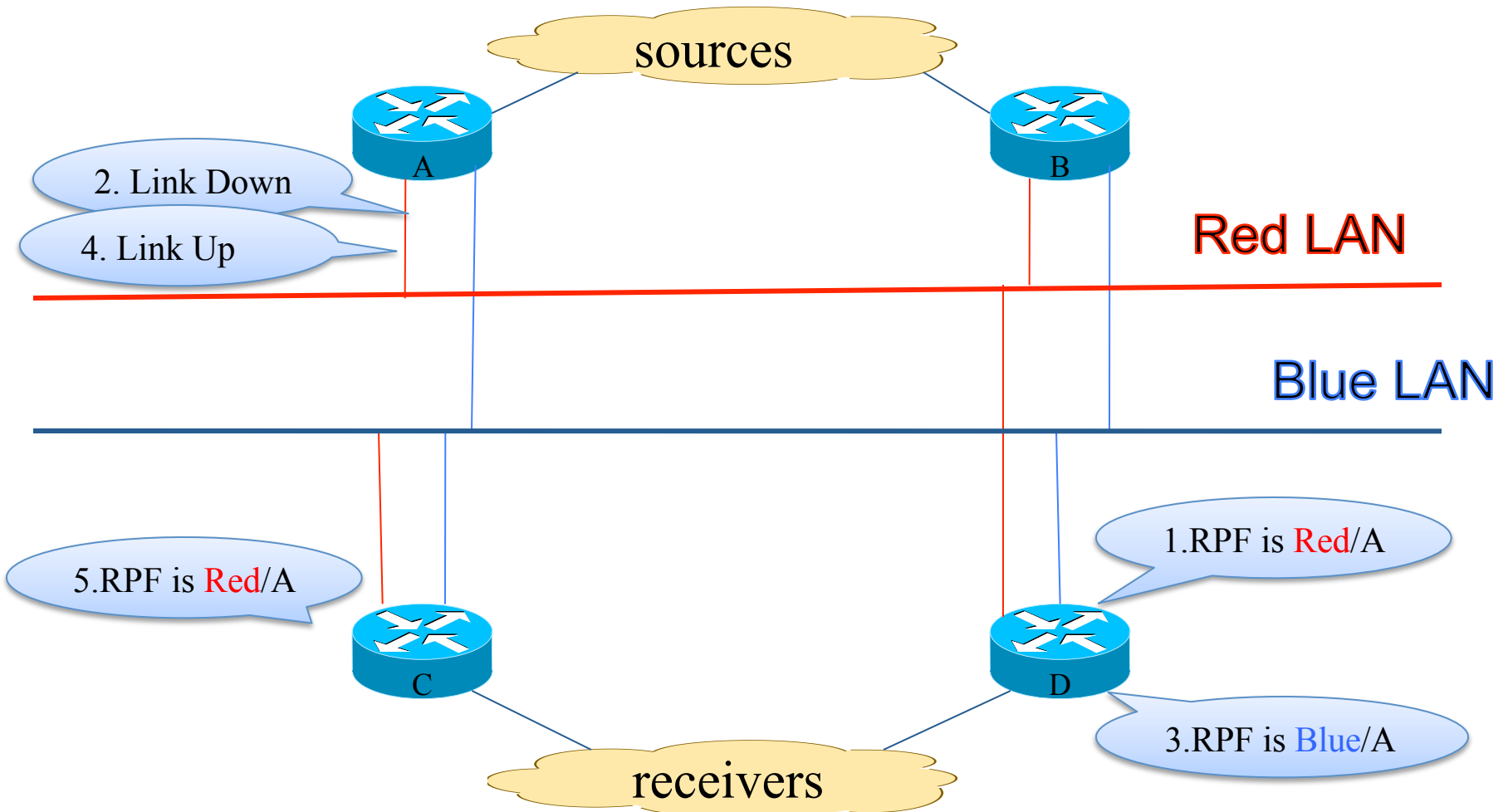
# Use Case 1



# Analysis On Case 1

- Different routing policy
  - E.g, A/B and C/D are connected via BGP
  - C and D may have different number of paths
- Different hash algorithm
  - C runs source based hash while D runs group based hash
- Other implementation specific factors
  - Available paths are not sorted the same on C/D

# Use Case 2



# Design Consideration

- Minimize control traffic in steady state
- Minimize unnecessary traffic disruption
- Reuse existing mechanism



# Open Items

- PIM Hello Options

ECMP Assert Hello Option

```
0           1           2           3
0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1
+-+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+
|      Type = TBD      |      Length = 0      |
+-+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+--+
```

- Normalized Metric ?
- Interface ID Insertion



# Questions For The WG

- Interest?