Remote LFA

Alternate selection

1. Per-Prefix LFA

2. Remote LFA with implicit LDP LSP to PQ node

3. Remote LFA with explicit RSVP LSP to Q node

   rule 3 is optional and happens only if 100%-coverage is desired

Excellent Coverage (rule2)

Topology	Per-link LFA	Per-prefix LFA	Remote LFA
T1	45%	77%	78%
T2	49%	99%	100%
T3	88%	99%	99%
T4	68%	84%	92%
T5	75%	94%	99%
T6	87%	99%	100%
T7	16%	67%	96%
T8	87%	100%	100%
T9	67%	80%	98%
T10	98%	100%	100%
T11	59%	77%	95%
Average	67%	89%	96%
Median	68%	94%	99%

Confirmed by independent study (Wandl/Verizon at Isocore 2010), or Cariden

1. Per-Prefix LFA
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100% Coverage (rule3)

- Rule3
  - Already available via non-automated PQ algorithm in 3 router implementations, under deployment

1. Per-Prefix LFA
2. Remote LFA with implicit LDP LSP to PQ node
3. Remote LFA with explicit RSVP LSP to Q node

Excellent Scale

- Implicit LDP LSP to PQ (rule2) always exist
  - No new LSP required at all

Incremental Deployment

- Keep the LFA properties
  - No protocol change at all
  - Only requires new code at the node where RemoteLFA is enabled
    - Specifically, the PQ node does not require new code

Simple computation

- PQ is per-link not per-prefix
- P set is known once per-prefix LFA is computed
- Q set is a simple dijkstra

Reality

- One router implementation is FCS
- A second one on the line
- Others expected based on deployment discussion
- Confirmed deployment projects