Extensions to RSVP-TE to Support Route Exclusion Using Path Key Subobject

CCAMP WG, IETF 89th, London, UK
draft-zhang-ccamp-route-exclusion-pathkey-01.txt
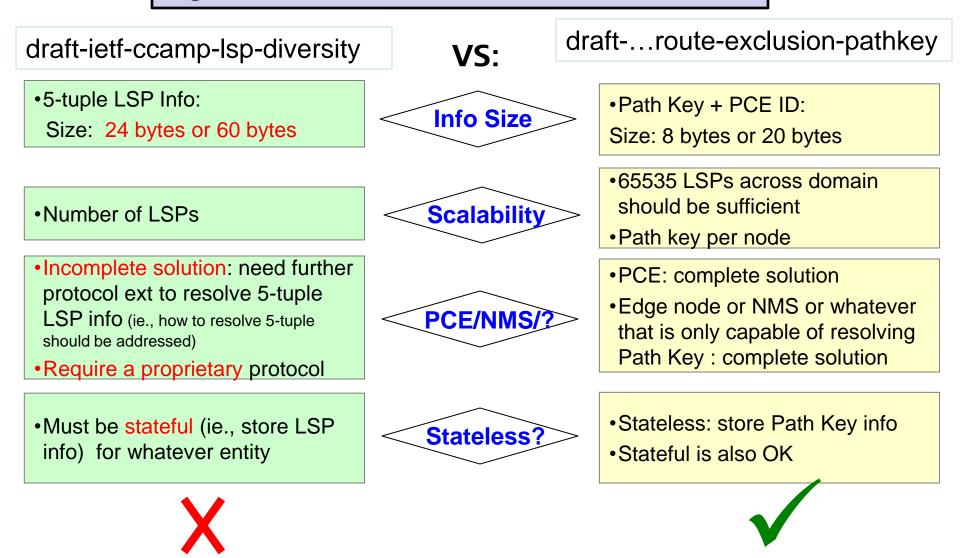
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Changes from Version 00

- Added explanation of how the Path Key can be resolved
  - A dedicated or co-located PKS resolution entity, e.g., a PCE (note: do not need full PCE function); => NO extensions to PCEP is needed.
  - NMS or other proprietary mechanisms

- Modified the RSVP-TE XRO PKS format and improved processing text;
  - Keep it consistent with RFC5553
  - L bit explanation and how to handle if Path Key cannot be decoded

- Added Manageability Consideration
  - PKS uniqueness
  - Path Key re-use
  - Path key update

Comparison and Analysis

Objective is the same: exclude a confidential path segment from another LSP.

draft-ietf-ccamp-lsp-diversity **VS:** draft-…route-exclusion-pathkey

Info Size

- 5-tuple LSP Info:
  Size: 24 bytes or 60 bytes

- Path Key + PCE ID:
  Size: 8 bytes or 20 bytes

Scalability

- Number of LSPs

- 65535 LSPs across domain should be sufficient
- Path key per node

PCE/NMS/?

- Incomplete solution: need further protocol ext to resolve 5-tuple LSP info (ie., how to resolve 5-tuple should be addressed)
- Require a proprietary protocol

- PCE: complete solution
- Edge node or NMS or whatever that is only capable of resolving Path Key : complete solution

Stateless?

- Must be stateful (ie., store LSP info) for whatever entity

- Stateless: store Path Key info
- Stateful is also OK

Next Step

- Add Attribute Flag to indicate exclusion type
- Make PCE-ID field generic
- Effort to achieve one common solution
  - Would be happy to work with the authors of other drafts to find a common solution, which will lead to one merged draft
  - Requirements analysis
  - Gap analysis on solutions
- Any more comments?