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

CCAMP WG, IETF 89\textsuperscript{th}, 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.

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

- Number of LSPs

- 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

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

VS:

draft-…route-exclusion-pathkey

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

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

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

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

X

✓
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?