IETF 116 – Online
PCE Working Group

PCEP extensions for Circuit Style Policies

draft-sidor-pce-circuit-style-pcep-extensions

Samuel Sidor – Cisco Systems (ssidor@cisco.com) – Presenter
Zafar Ali – Cisco Systems (zali@cisco.com)
Praveen Maheshwari – Airtel India (praveen.maheshwari@airtel.com)
Reza Rokui – Ciena (rrokui@ciena.com)
Andrew Stone – Nokia (andrew.stone@nokia.com)
Luay Jalil – Verizon (luay.jalil@verizon.com)
Shuping Peng - Huawei Technologies (pengshuping@huawei.com)
Tarek Saad - Cisco Systems (tsaad.net@gmail.com)
Daniel Voyer - Bell Canada (daniel.voyer@bell.ca)

Motivation

- Circuit Style Segment-Routing Policy
  - Designed to satisfy requirements for connection-oriented transport services
  - Details described in draft-schmutzer-spring-cs-sr-policy
- PCC to convey information about:
  - Desired path persistency
  - Allowed hop types in the path-computation – strict or loose
- PCEP extensions introduced in this draft are reusable

Path persistency

- New TLV in LSPA object to block path re-computation
- If TLV is included
  - PCE MUST NOT re-compute if current path is valid
  - It is allowed to trigger path computation explicitly on PCE
- P-flag
  - PCE MUST NOT re-compute even if current path is invalidated
- F-flag
  - All re-computation for that LSP are blocked

Strict path

- Stateless PCEP
  - Existing O-flag in RP object clarified for Segment-routing
- Stateful PCEP
  - New O-flag in LSP-EXTENDED-FLAG TLV
  - Allow strict hops only if flag is set
  - Loose path is acceptable if:
    - TLV is not included
    - O-flag is not set
- Segment-routing
  - If flag is set
    - Only SIDs, which will use explicitly specified adjacencies
    - Adjacency SIDs allowed, Prefix SIDs disallowed

Next steps

- Comments and discussion are welcome
- WG adoption