Yang model for requesting Path Computation

draft-ietf-teas-yang-path-computation-21
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Summary of changes from v18 (WG LC)

- Addressed WG LC comments received from Chaode, Dhruv and Tom Petch
  - Clarified it augments RPC defined in draft-ietf-teas-yang-te-32
  - Resolved WG LC comments on SVEC OFs
  - Aligned JSON examples with those in draft-ietf-teas-yang-te-32
- Aligned with draft-ietf-teas-rfc8776-update-06 and draft-ietf-teas-yang-te-33
  - Renamed te-types:tunnel-actions-type with te-types:tunnel-action-type to align with the changes in tsaad-dev/te#198
  - Removed co-routed leaf from secondary-path in alignment with the changes in tsaad-dev/te@008cd7b
  - Added preference for the secondary-reverse-path: fix #112
  - Associated forward and reverse co-routed secondary paths: fix #117
- Addressed post-WG LC comment
  - Added compute-priority leaf: fix tsaad-dev/te#226
  - Additional security considerations
- Editorial clean-up
  - Updated authors' list: fix #121
  - Updated the reference to RFC8776-bis: fix #123
  - Folded YANG tree diagram: fix #119
Added compute-priority leaf

- Path computation can be different depending on the order of the request
  - e.g. because of remaining bandwidth for which one order can be feasible for one request and not feasible changing the order.
- Orange (Esther Lerouzic) asked for the introduction of an “index” in the unordered list of request
- You could avoid to add an index ordering by user but that would dictate order by user all the time
- Following the PCEP proposal it was decided:
  - to add a “priority” leaf (see Section 7.4.1 of RFC5440: Path Computation Element (PCE) Communication Protocol (PCEP))
  - To add a “feature” “compute-priority” indicating the server supports path computation request's priority

```plaintext
augment /te:tunnels-path-compute/te:input/te:path-compute-info:
    +-- path-request* [request-id]
        |  +-- request-id                uint32
        |  |   +-- compute-priority?       uint8
        |  |       {compute-priority}?
```
Additional Security consideration

• We got a comment from one of the contributors (C. Perocchio (Ericsson)) related to section 10.7.2 of RFC5440
  • The usage of “priority” attribute does not protect against DoS since the attacker could set all the request to the same highest priority.
  • A shaping-policing mechanism should be considered in the implementation

• We added text in the security section:
  “The RPC defined in this document can also be used for Denial-of-service (DoS) attacks. The security considerations defined in section 10.7.2 of [RFC5440] also applies to the use of this RPC.

  The definition of the input shaping/policing mechanisms and of their configuration is outside the scope of this document.”
Next steps

• A 2nd WG LC has started on Oct 24th, 2023
  • No WG LC comments received so far (WG LC ends today)
  • Few pending replies to the IPR poll

• The draft is ready to move forward
  • Consider dependencies from other I-Ds already in WG LC or ready for WG LC