

Yang model for requesting Path Computation

draft-ietf-teas-yang-path-computation-21

IETF 117 – San Francisco

Italo Busi (Huawei)

Sergio Belotti (Nokia)

Oscar Gonzales de Dios (Telefonica)

Anurag Sharma (Google)

Yan Shi (China Unicom)

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 refence to RFC8776-bis: fix [#123](#)
 - Folded YANG tree diagram: fix [#119](#)

Added compute-priority leaf

- Path computation can be different depending of 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 Lerouzig) 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

```
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

- All WG LC comments have been addressed
- No pending open issues are left
- We think the draft is now ready for a 2nd WG LC
 - Suggested to be joint with te-tunnel and te-types to keep alignment