A YANG Data Model for PCEP
draft-pkd-pce-pcep-yang-06
https://github.com/dhruvdhody-huawei/pcep-yang

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# Introduction

<table>
<thead>
<tr>
<th>Yang Data Model</th>
<th>Management of PCEP speakers</th>
<th>Configurations</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>PCEP as per RFC 5440</td>
<td>State</td>
</tr>
<tr>
<td></td>
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<td>Aligned to PCEP MIB</td>
</tr>
<tr>
<td></td>
<td>Extensions</td>
<td>Stateful PCE, SR, SVEC, OF, GCO, P2MP...</td>
</tr>
</tbody>
</table>
Recent Changes

- Adding reference to the LSP state in the TE model
- PCE-Initiated LSP
- Segment Routing (SR)
- Authentication
- Association
As discussed during the last meeting, a reference to the ‘lsp-state’ in TE model is added.

PCEP-Yang has only PCEP specific state.

All other state is in the TE model.
PCE-Initiated LSP

- The PCE-Initiation capability at the local entity and the remote peer
  - Configurations
  - State
- Flag in the lsp-state, reference to PCE that initiated (if-known)
- PCInitiate message statistics
Segment Routing (SR)

The SR capability at the local entity and the remote peer

- Configurations
- State

No other change!

- Rest to be taken care by the TE models (?)

MSD
- Maximum SID Depth
- Should be moved to the SR model

module: ietf-pcep
---rw pcep!
    | ---rw entity
    |     ...
    |     ---rw capability
    |     ...
    |     | ---rw sr {sr}?
    |     |     ---rw enabled? boolean
    |     |     ---rw msd? uint8

* also added at -
  - the remote peer configurations
  - the pcep state of local entity and remote peers
Authentication

Key and Key-chain
- Support for key-chain
- Support for key
  - Including MD5
  - As per the key-chain yang model

TLS

Pending
- TLS parameters
- TCP-AO
Associations

module: ietf-pcep
+--ro pcep-state
  +--ro entity
    ...
    +--ro lsp-db {stateful}?
      | +--ro association-list* [id source global-source extended-id]
      | | +--ro type? assoc-type
      | | +--ro id uint16
      | | +--ro source inet:ip-address
      | | +--ro global-source uint32
      | | +--ro extended-id string
      | | +--ro lsp* [plsp-id pcc-id]
      | | | +--ro plsp-id -> /pcep-state/entity/lsp-db/lsp/plsp-id
      | | | +--ro pcc-id -> /pcep-state/entity/lsp-db/lsp/pcc-id
      | +--ro lsp* [plsp-id pcc-id]
    ...
    +--ro association-list* [id source global-source extended-id]
      | +--ro id -> /pcep-state/entity/lsp-db/association-list/id
      | +--ro source -> /pcep-state/entity/lsp-db/association-list/source
      | +--ro global-source -> /pcep-state/entity/lsp-db/association-list/global-source
      | +--ro extended-id -> /pcep-state/entity/lsp-db/association-list/extended-id

For each association
• list of all the LSPs

For each LSP
• list of all the associations it belongs to
## Requirement to the TE model

<table>
<thead>
<tr>
<th>TE Yang model</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark tunnels to be delegated during configuration at the device</td>
<td></td>
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<tr>
<td>Mark tunnels as PCE-initiated tunnels during configuration at the controller</td>
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</tbody>
</table>
Next Steps

- Fix some of the pending item in the existing features
- Yang Model rearrangement based on the discussion in netmod (?)
- WG Adoption – request chairs to poll...
Thank You!