YANG Models for Transport Client Signals

CCAMP WG, IETF106, Singapore

draft-ietf-ccamp-client-signal-yang-01

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Change Summary since IETF104

- Draft Status: WG Adopted May 2019
- No Text Changes;
- Model Changes:
  - Added new module ietf-trans-client-svc-types;
    - Would be useful in Configuration & PM & OAM for transparent client signal;

Prefix	YANG module	Reference
yang	ietf-yang-types	[RFC6991]
te-types	ietf-te-types	[ietf-teas-yang-te-types]
rt-types	ietf-routing-types	[RFC8294]
layer1-types	ietf-layer1-types	[ietf-ccamp-layer1-types]
etht-types	ietf-eth-tran-types	This Document
clntsvc	ietf-trans-client-service	This Document
ethtsvc	ietf-eth-tran-service	This Document
clntsvc-types	ietf-trans-client-svc-types	This Document

  - See next pages for other model changes

Update Module for Ethernet Service

Modify the ietf-eth-tran-service:

Added protection/restoration info

```
+--rw resilience
|  +--rw protection
|  |  +--rw enable?                            boolean
|  |  +--rw protection-type?
|  |  |       identityref
|  |  +--rw protection-reversion-disable?      boolean
|  |  +--rw hold-off-time?                     uint32
|  |  +--rw wait-to-revert?                    uint16
|  |  +--rw aps-signal-id?                     uint8
|  +--rw restoration
|     +--rw enable?                             boolean
|     +--rw restoration-type?
|     |       identityref
|     +--rw restoration-scheme?
|     |       identityref
|     +--rw restoration-reversion-disable?      boolean
|     +--rw hold-off-time?                      uint32
|     +--rw wait-to-restore?                    uint16
|     +--rw wait-to-revert?                     uint16
```

Use the protection-restoration-properties from ietf-te-types

Create choice for underlay tunnel

```
+--rw underlay
|  +--rw (technology)?
|  |  +--:(native-ethernet)
|  |  |  +--rw eth-tunnels* [name]
|  |  |     +--rw name
|  |  |     |       -> /te:te/tunnels/tunnel/name
|  |  |     +--rw encoding?          identityref
|  |  |     +--rw switching-type?    identityref
|  |  +--:(frame-base)
|  |  |  +--rw otn-tunnels* [name]
|  |  |     +--rw name
|  |  |     |       -> /te:te/tunnels/tunnel/name
|  |  |     +--rw encoding?          identityref
|  |  |     +--rw switching-type?    identityref
|  |  +--:(mpls-tp)
|  |     +--rw pw
|  |        +--rw pw-id?
|  |        |       string
|  |        +--rw pw-name?
|  |        |       string
```

Categorize per switching technology

- ETH Tunnel ;
- OTN Tunnel;
- MPLS-TP Tunnel;

Update for Transparent Client Signals

Modify the ietf-trans-client-service:

Added direction info

```
+--rw client-svc
   +--rw client-svc-instances* [client-svc-name]
      +--rw client-svc-name            string
      +--rw client-svc-title?          string
      +--rw client-svc-descr?          string
      +--rw client-svc-customer?       string
      +--rw resilience
      +--rw te-topology-identifier
      |  +--rw provider-id?   te-global-id
      |  +--rw client-id?     te-global-id
      |  +--rw topology-id?   te-topology-id
      +--rw admin-status?              identityref
      +--rw src-access-ports
      |  +--rw access-node-id?   te-types:te-node-id
      |  +--rw access-ltp-id?    te-types:te-tp-id
      |  +--rw client-signal?    identityref
      +--rw dst-access-ports
      |  +--rw access-node-id?   te-types:te-node-id
      |  +--rw access-ltp-id?    te-types:te-tp-id
      |  +--rw client-signal?    identityref
      +--rw direction?                 identityref
      +--rw svc-tunnels* [tunnel-name]
```

Create corresponding types

```
identity direction {
  description
    "Direction information of Client Signal.";
}

identity bidirectional {
  base direction;
  description
    "Client Signal is bi-directional.";
}

identity unidirectional {
  base direction;
  description
    "Client Signal is uni-directional.";
}
```

Starting from the direction information;

Summary & Next Step

- Open issues are proposed and progressing:
  - Model available on: https://github.com/haomianzheng/IETF-ACTN-YANG-Model/tree/master/YANG/ccamp/Client-signal-yang ;
  - Open issues include:
    - Harmonize with functionality models, such as scheduling, performance monitoring and OAM;
    - May extend types module to indicate more detailed configuration info such as access point type (O/E), expected performance, etc.
- Need more work before WG LC;

A YANG Data Model for Ethernet TE Topology

CCAMP WG, IETF106, Singapore

draft-zheng-ccamp-client-topo-yang-07

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Change Summary since IETF105

- Check RFC8407 to follow model guideline
- Harmonized with other updated YANG models

Next Step

- Request for WG adoption.