

# A YANG Data Model for Layer 1 Types

draft-ietf-ccamp-layer1-types-01

# YANG Model for OTN Topology

draft-ietf-ccamp-otn-topo-yang-09

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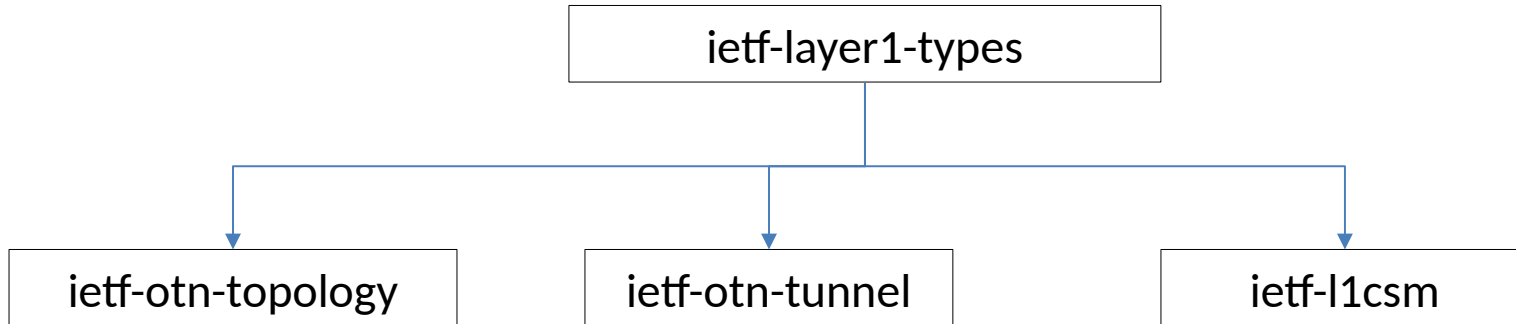
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# Main Content in ietf-layer1-types

Model Relationship:



Types in Layer1

Base Type	Detailed Type
odu-type	ODU0/ODU1/ODU1e/ODU2/ODU2e/ODU3/ODU3e1/ODU3e2/ODU4/ODUflex
Client-signal	ETH: 1Gb/10Gb-LAN/10Gb-WAN/40Gb/100Gb
	STM: STM-1/4/16/64/256
	OC: OC-3/12/48/192/768
	FC: FC-100/200/400/800 /1200/1600/3200
	FICON: 4G/8G

# Changes Since -01

- Checked RFC8407 YANG Guideline;
- Added text Description of grouping usage;
  - Clarified relationship between TPN and TS;

As described in [[RFC7139](#)], the OTN label usually represents the Tributary Port Number (TPN) and the related set of Tributary Slots (TS) assigned to a client layer ODU LSP (LO ODU<sub>j</sub> or ODU<sub>k</sub>) on a given server layer ODU (HO-ODU or ODU<sub>Cn</sub>, respectively) Link (e.g., ODU2 LSP over ODU3 Link). Some special OTN label values are also defined for an ODU<sub>k</sub> LSP being setup over an OTU<sub>k</sub> Link.

- Renamed a few grouping names to fit in 'OTN term';
  - otn-label-restriction -> otn-label-range-info;
  - otn-link-label -> otn-label-start-end;
  - otn-path-label -> otn-label-hop;

# Changes Since -01

- Added leaf-list in otn-label-range-info;

```
leaf-list odu-type-list {
  type identityref {
    base odu-type;
  }
  description
    "List of ODU types to which the label range applies.
    Empty odu-type-list means all the ODU types are applicable
    per label range. ";
}
```

- Removed the identity 'ODUCn',
  - As not a 'switching type' in base odu-type;
- Change the range of TPN/TS in description to '1..4095';
- Add back the coding function (defined in MEF63) for the usage in L1CSM;
  - MEF63 definition: "Functionality which encodes bits for transmission and the corresponding decode upon reception"

# Next Step

- Harmonize with related models;
  - Done for ietf-te-types, ietf-otn-topology, ietf-otn-tunnel, ietf-l1csm;
  - Open in ietf-layer0-types;
    - Grouping names changes has to be aligned as well
      - Eg. Wson-label-restriction  $\sqsubseteq$  wson-label-range-info
- Request for WG LC & YANG Doctor Review;

# Main Content in ietf-otn-topology

## Attributes Augmentation

```
module: ietf-otn-topology
  augment /nw:networks/nw:network/nw:network-types/tet:te-topology:
    +--rw otn-topology!
  augment /nw:networks/nw:network/nt:link/tet:te/tet:te-link-attributes:
    +--rw tsg?          identityref
    +--rw distance?    uint32
  augment /nw:networks/nw:network/nw:node/nt:termination-point/tet:te:
    +--rw client-svc!
      +--rw client-facing?          boolean
      +--rw supported-client-signal* identityref
```

## Bandwidth Augmentation

```
+---:(otn)
  +---rw odulist* [odu-type]
    +---rw odu-type    identityref
    +---rw number?     uint16
```

## Label Augmentation

### For label-start/label-end;

```
+---:(otn)
  +---rw (otn-label-type)?
  +---:(tributary-port)
  | +---rw tpn?    uint16
  +---:(tributary-slot)
  +---rw ts?      uint16
```

### For label-hop;

```
+---:(otn)
  +---ro tpn?      uint16
  +---ro tsg?      identityref
  +---ro ts-list?  string
```

### For label-restriction;

```
+---ro range-type? identityref
+---ro tsg?         identityref
+---ro priority?   uint8
```

# Summary of Changes (with -07)

- No Text Changes:
- YANG model Changes:
  - Reformat the tree to satisfy IETF line length restriction;
  - Harmonized with ietf-layer1-types:
    - Added the otn-label-step and set it as 1 for OTN;

# Next Step

- Request for WG LC/YANG Doctor Review;
  - Together with ietf-layer1-types would be efficient;
- Model available at:
  - ietf-layer1-types:  
<https://github.com/haomianzheng/IETF-ACTN-YANG-Model/tree/master/YANG/ccamp/layer1-types>
  - ietf-otn-topology:  
<https://github.com/haomianzheng/IETF-ACTN-YANG-Model/tree/master/YANG/ccamp/otn-topology>