

A YANG Data Model for Client Signal Performance Monitoring

CCAMP WG, IETF116, Yokohama

draft-zheng-ccamp-client-pm-yang-07

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Motivation

- The life cycle of connection:
 - Topology collected;
 - Tunnel created;
 - Client-signal deployed;
 - **Performance Monitoring.**
- PM based on configured client signals;
 - Ethernet service;
 - Transparent client signals;

Parameters	Layer2	Layer1	Layer0
Delay/Latency	✓	✓	✓
Bit Error Rate(BER)	?	✓	✓
Packet Loss	✓	✗	✗
Jitter	✓	✓	✓
Byte/Packet number	✓	✓	✓
Power	✗	✗	✓

Model Relationship

Importation & Augmentation:

- We imported the ietf-eth-tran-service and ietf-trans-client-service, in the client-signal-yang draft;

Other PM-related Documents:

- draft-yu-performance-monitoring-yang: focus on the PM mainly on the resources, instead of the client-signal;
- draft-ietf-teas-actn-pm-telemetry-autonomics: focus on the PM mainly on VN and Tunnels, instead of service (covered in this document);

Model Structure - PM

```

+--ro service-pm-state
  +--ro oam-state
    | +--ro cc-state      enumeration
    | +--ro lm-state?    enumeration
    | +--ro dm-state?    enumeration
  +--ro performance-data* [parameter-name]
    | +--ro parameter-name identityref
    | +--ro parameter-value* [index]
    |   +--ro index      uint64
    |   +--ro value       performance-parameter-value
    |   +--ro value-unit  string
    |   +--ro value-description? string
    |   +--ro start-time? yang:date-and-time
    |   +--ro end-time?   yang:date-and-time
  +--ro monitor-state identityref
  +--ro error-info
    | +--ro error-code? uint32
    | +--ro error-message? string
  +--ro alarm
    +--ro status? identityref

```

Delay, BER, etc...;

Numerical Value;

Unit (ms, Gbps, etc.)

Time Interval for PM

[Issue #88](#): to align the rate for packet traffic, and understand how the rate is measured;
- dependent on the resource PM;
[Issue #89](#): at which point the measurement is required?

Model Structure - OAM

```
+--rw oam-config
|   +--rw source
|   |   +--rw md-name?      string
|   |   +--rw ma-name?      string
|   |   +--rw ma-level?     string
|   |   +--rw meg-id?       string
|   |   +--rw meg-level?    string
|   |   +--rw mep-id?       uint8
|   |   +--rw remote-mep-id? uint8
|   +--rw destination
|   |   +--rw md-name?      string
|   |   +--rw ma-name?      string
|   |   +--rw ma-level?     string
|   |   +--rw meg-id?       string
|   |   +--rw meg-level?    string
|   |   +--rw mep-id?       uint8
|   |   +--rw remote-mep-id? uint8
|   +--rw cc-interval?      identityref
|   +--rw lm-interval?      identityref
|   +--rw dm-interval?      identityref
```

OAM configuration set

Interval setting

Next Step

- Request for WG adoption
 - Confirm the model relationship is properly designed;
- Will continue working on
 - The clarification with model relationship
 - The details of each PM parameter, including definition and measurement