A YANG Data Model for Resource Performance Monitoring

draft-yu-ccamp-resource-pm-yang-00
(replace of draft-yu-ccamp-optical-resource-pm-yang)

IETF 120 Meeting

on behalf of Authors Team (Chaode Yu, Fabio Peruzzini, Zheng Yanlei, Italo Busi, Aihua Guo, Victor Lopez, Xing Zhao, Mingshuang Jin)
Document Status

- Started as a optical-specific work
- Generalized for both optical and IP domain recently (latest version)
- Most of the MTOSI PM interfaces have been covered by the current model and it is harmonized with the existing IETF models and terminologies;
Model Usage Example

- Unified Resource PM Interface for both IP and Optical Domain

1. **On-demand PM data retrieval**, e.g., get the CPU usage of O2 during 13:00-15:00

2. **TCA configuration**, e.g., trigger major alarm if the ingress error packet number of interface 1 becomes more than 10000, and clear the alarm if the number falls below 100

3. **PM task control/data clear**, e.g., create PM task for interface 1 of R3, monitoring ingress error packet number and ingress discard packet number

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R1, R2, R3: network elements in IP domain
O1, O2: network elements in optical domain
TP: termination point
TTP: tunnel termination point
Model Overview

• Supported Resources and Corresponding PM Capabilities
  - Resource-type: network element, interface, board, termination point, tunnel termination point
  - Indicator-name: defined as “String” type, compatible for extension, example:
    Network element: CPU usage, memory usage, total active routes, etc.
    Interface: Ingress unicast packets, Ingress discard packets, Ingress error packets, etc.

• TCA Management
  - profile: pre-define the TCA configurations for specific indicators
    - Threshold-type: upperbound-trigger, upperbound-clear, lowerbound-trigger, lowerbound-clear
    - Severity: indicate the alarm severity once the threshold is triggered, i.e., critical, major, minor, warning
  - Tca: apply profile or define TCA configuration directly for resources

• Monitor task
  - period: the period to collect the performance data
  - Admin status: enable/disable
Next Step

➢ To see whether there are any feedbacks or new requirement

➢ Call for interest & joint contribution
  ● Github: https://github.com/YuChaode/draft-yu-ccamp-resource-pm-yang