

A YANG Data Model for Optical Resource Performance Monitoring

CCAMP WG, IETF118

draft-yu-ccamp-optical-resource-pm-yang-02

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Scope of the Draft (Ref: MTOSI)

3.1 Business Requirements

The following business requirements are stated:

R_TMF518_RPM_BR_0001	The Interface shall support the retrieval of current and historical performance measurements for network resources.
Source	TMF518_RPM, Version 1.0
R_TMF518_RPM_BR_0002	The Interface shall support the distribution of Threshold Crossing Alerts (TCAs) to subscribed OSs.
Source	TMF518_RPM, Version 1.0
R_TMF518_RPM_BR_0003	The Interface shall support the control of performance monitoring in the network. This includes PM control, e.g., the enabling and disabling of PM collection and TCA control, e.g., the enabling and disabling of TCA generation.
Source	TMF518_RPM, Version 1.0

Service Interfaces	Operations	Supporting Status by Our I-D
PerformanceManagementControl		
	clearPerformanceMonitoringData	Supported
	disablePerformanceMonitoringData	Supported
	enablePerformanceMonitoringData	Supported
PerformanceManagementRetrieval		
	getAllCurrentPerformanceMonitoringData	Supported
	getAllPerformanceMonitoringPoints	Supported
	getHistoryPerformanceMonitoringData	Supported
	getHoldingTime	Supported
	getMePerformanceMonitoringCapabilities	Supported
	getProfileAssociatedTerminationPoints	Supported
	getPerformanceMonitoringDataIterator	Out of scope
	getPerformanceMonitoringPointsIterator	Out of scope
ThresholdCrossingAlertControl		
	createTcaParameterProfile	Supported
	deleteTcaParameterProfile	Supported
	disableThresholdCrossingAlert	Supported
	enableThresholdCrossingAlert	Supported
	getAllTcaParameterProfiles	Supported
	getTcaParameterProfile	Supported
	getTcaParameterProfilesIterator	Out of scope
	getTcaTpParameter	Supported
	setTcaParameterProfile	Supported
	setTcaTpParameter	Supported

- Currently all the functionalities of MTOSI PM interfaces have been covered by our draft.
- This model is harmonized with existing IETF data models, e.g. RFC8345(network topology) and inventory.

optical-specific PM indicator (ITU-T)

Table 10-1 – Performance management information

Performance management information	OTN function	PM current data and history data collected in EMF
ODUT_TT_Sk_MI_pN_EBC ODUT_TT_Sk_MI_pN_DS ODUT_TT_Sk_MI_pF_EBC ODUT_TT_Sk_MI_pF_DS ODUT_TT_Sk_MI_pN_delay ODUT_TT_Sk_MI_pBIAE ODUT_TT_Sk_MI_pIAE	ODUT_TT_Sk See clause 14.5.1.1.2 of [ITU-T G.798]	ODUkT_TTP_Sk: nSES, fSES, {UAS nUAS, fUAS}, nBBE, fBBE, Proactive DM is FFS. See clause 14.2.1 of [ITU-T G.798] for pN_Delay (Note 4)
ODUTm_TT_Sk_MI_pN_EBC ODUTm_TT_Sk_MI_pN_DS ODUTm_TT_Sk_MI_pF_EBC ODUTm_TT_Sk_MI_pF_DS ODUTm_TT_Sk_MI_pBIAE ODUTm_TT_Sk_MI_pIAE	ODUTm_TT_Sk See clause 14.5.1.1.3 of [ITU-T G.798]	ODUkTm_TTP_Sk: nSES, fSES, {UAS nUAS, fUAS}, nBBE, fBBE, (Note 4)
OSx_TT_Sk_MI_pN_DS	OSx_TT_Sk	OSx_TTP_Sk: nSES, nUAS
OSx/CBRx-b_A_Sk_MI_pFECcorrErr	OSx/CBRx-b_A_Sk	OSx/CBRx_Sk: CD/HD: #FECcorrErr where #FECcorrErr = count of FEC-corrected Errors
OSx/CBRx-c_A_Sk_MI_FECcorrErr	OSx/CBRx-c_A_Sk	
OSx/CBRx-b_A_Sk_MI_pFECuncorrErr	OSx/CBRx-b_A_Sk	OSx/CBRx_Sk: CD/HD: #FECuncorrErr where #FECuncorrErr = FEC-uncorrected Errors
OSx/CBRx-c_A_Sk_MI_pFECuncorrErr	OSx/CBRx-c_A_Sk	

It is found that the modeling of ITU-T and IETF TE modeling are quite different which needs more alignment: see requirements in the ACTN FGNM draft.

—Reference from ITU-T G.874

Next Step

- Call for Working Group Adoption
- Candidate use cases design and call for contribution to TNBI Design Team

Thank You !