Main differences between TAPI 2.3 and TAPI 2.1.3

24 May 2021

1 Tapi Common

1. Removed the "presence" statement of *context* container
2. Removed grouping *resource-spec* and *service-spec*
    - The classes now directly *uses global-class* or *uses local-class.*
3. identity OBJECT_TYPE is now defined in TapiCommon
    - In 2.1.3 was an enum in TapiNotification
    - In 2.3 each module defines its own identities, e.g. TapiConnectivity the CONNECTIVITY_OBJECT_TYPE
4. Added identity PM_PARAMETER_NAME
5. *layer-protocol-name* DIGITAL_OTN replaces ODU
6. *termination-state*
    - CAN_NEVER_TERMINATE replaces LP_CAN_NEVER_TERMINATE
    - NOT_TERMINATED replaces LT_NOT_TERMINATED
    - PERMANENTLY_TERMINATED replaces LT_PERMENANTLY_TERMINATED
7. grouping *bandwidth-profile* deleted (no more present in grouping *capacity*)
    - typedef *bandwidth-profile-type* deleted

2 Tapi Topology

1. Grouping *topology* now includes list *boundary-node-edge-point* (not yet used in RIA)
2. NEP, the *supported-cep-layer-protocol-qualifier* is now *supported-cep-layer-protocol*, with different type (*nep-layer-protocol-capability*)
3. NEP, added the (not yet used in RIA)
    - list *supported-mux-sequence* (uses *multiplexing-sequence*)
    - list *available-mux-sequence* (uses *multiplexing-sequence*)
    - leaf *base-layer-protocol-qualifier* (type *tapi-common:layer-protocol-qualifier*)
4. NEP, *available-cep-layer-protocol* is now *supported-cep-layer-protocol*
5. NEP, added the (specified in RIA 1.1)
    - container *inter-domain-plug-in-pac* (uses *inter-domain-plug-in-pac*)
6. *protection-type*:
    - NO_PROTECTION replaces NO_PROTECTON
7. New identity TOPOLOGY_OBJECT_TYPE

3 Tapi Connectivity

1. Added new grouping *connectivity-service-internal-point*, for possible future usage (not yet used in RIA)
2. Grouping *connection*, added
    - *layer-protocol-qualifier*
    - container *bounding-node* (uses *tapi-topology:node-ref*) (not yet used in RIA)
3. Grouping *connection-end-point*, added
    - *protection-role* (type *protection-role*)
4. grouping *connectivity-constraint*, removed
    - *service-layer* (redundant wrt *connectivity-service* layer)
    - *connectivity-direction* (redundant wrt *connectivity-service direction*)
5. grouping *connectivity-service*, added
    - *layer-protocol-name*
    - *layer-protocol-qualifier*
    - *direction* (type *tapi-common:forwarding-direction*)
    - list *internal-point* (list of *connectivity-service-internal-point)*
    - list *connectivity-service* (association to other *connectivity-service* instances for complex connectivity provisioning, not yet used in RIA)
6. grouping *connectivity-service*, strict composite instead of extended composite for
    - *connectivity-constraint, routing-constraint, resilience-constraint*, e.g. from
        - *uses tapi-path-computation:routing-constraint* to
        - *container routing-constraint {*
            uses tapi-path-computation:routing-constraint
7. grouping *connectivity-service*, now *topology-constraint* is a list
8. grouping *connectivity-service-end-point*, added
    - list *csep-role* (not yet used in RIA)
    - list *assembled-connectivity-service-end-point* (for inv mux like OTSiA --> n x OTSi on distinct line ports)
    - list *server-constraint* (a new grouping for some use cases involving server layer provisioning, e.g. DSR over ODU)
9. container *resilience-route-pac* renamed as *resilience-route*
10. grouping *switch*, removed
    - *selection-control* (moved to *ResilienceConstraint*)
11. grouping *resilience-constraint*, added
    - *fault-condition-determination* (type *fault-condition-determination*)
    - *selection-control*
    - list *resiliency-route-constraint* (the associated constraints related to resiliency routes)
12. new grouping *resiliency-route-constraint* (the constraints related to the resiliency route), with
    - *priority*
    - *routing-constraint*
    - *topology-constraint*
13. New identity FAULT_CONDITION_DETERMINATION
14. New identity CONNECTIVITY_OBJECT_TYPE
15. New type *csep-role*

4 Tapi Equipment

1. Fixed *supporting-physical-span* augmentation of *link*
2. Fixed missing
    - *base tapi-common:OBJECT_TYPE*
    - from *identity EQUIPMENT_OBJECT_TYPE*
3. grouping *connector-pin-address*, list *pin-and-role*, specified key *'location-in-connector*'
4. added *local-class* to *actual-non-field-replaceable-module* and *expected-non-field-replaceable-module*
5. grouping *equipment*, set as config false
    - list *expected-equipment*
    - container *actual-equipment*
6. grouping *physical-span*, set min-elements 1
    - list *abstract-strand*
7. grouping *physical-context*, removed wrong
    - uses *tapi-common:global-class*

5 Tapi OAM

1. New containers *connectivity-oam-job* and *connectivity-oam-service-point* augment resp. connectivity-service and CSEP. This allows OAM provisioning at Connectivity Service creation/update time.
2. Note that *alarm-info* and *tca-info* are now defined in TapiFm and augment *tapi-notification:notification*
3. Removed deprecated grouping *maintenance-entity-ref*
4. Several other enhancements.

6 Tapi Notification

1. *object-type* is now defined in TapiCommon
2. grouping *notification*, added
    - *layer-protocol-qualifier*
3. grouping *notification*, removed
    - *alarm-info* and *tca-info*, now defined in TapiFm module
4. New identity NOTIFICATION_TYPE, replaces enum *notification-type*
5. New identity NOTIFICATION_OBJECT_TYPE, replaces enum *object-type*, now defined in TapiCommon

7 Tapi ODU

1. Fixed wrong augment, now *odu-mep-spec* augments *oam-mep*.
2. ODU OAM completely restructured. Separation between connectivity and OAM parameters.
   List of OAM classes:
   - odu-oam-service --> odu-meg-spec
   - odu-oam-mep-service-point -- > same as odu-mep-spec (same classes for state and config)
   - odu-oam-mip-service-point -- > same as odu-mip-spec (same classes for state and config)
   - odu-mep-spec --> odu-mep, odu-tcm-mep, otu-mep --> otsia-mep
   - odu-mip-spec--> odu-mip, odu-tcm-mip
   - odu-measurement-job
   - odu-error-performance-data --> odu-cn-error-performance-data
   - odu-fec-performance-data
   - odu-delay-performance-data
3. ODU Connectivity classes:
   - odu-node-edge-point-spec
   - odu-connectivity-service-end-point-spec --> odu-csep-ttp-pac, odu-csep-ctp-pac
   - otu-connectivity-service-end-point-spec --> odu-cn-csep-ttp-pac, otu-csep-ttp-pac, otu-otsia-csep-ttp-pac
   - odu-connection-end-point-spec --> odu-termination-and-client-adaptation-pac, odu-ctp-pac
   - otu-connection-end-point-spec --> odu-cn-ttp-pac, otu-ttp-pac
4. FEC configuration and PM Metrics in OTU classes
5. New identity OTN_ALARM_CONDITION_NAME (preliminary – the detailed list of probable causes will be available in the RIA 1.1)
6. New identity OTN_FAULT_CONDITION_DETERMINATION
7. New identity ODU_OAM_JOB_TYPE
8. New identity ODU_PM_PARAMETER_NAME
9. New identity OTU_TYPE
10. New identity STANDARD_FEC_TYPE

8 Tapi Photonic Media

1. Classes reorganized
2. OTSi classes:
    - otsi-service-interface-point-spec
    - otsi-node-edge-point-spec (new)
    - otsi-connectivity-service-end-point-spec
    - otsi-connection-end-point-spec
    - otsia-csep-ttp-pac (new)
    - otsi-termination-pac
    - otsi-spectr-config-pac (new)
    - otsi-freq-config-pac (new)
3. Media Channel classes:
    - media-channel-service-interface-point-spec
    - media-channel-node-edge-point-spec
    - mcg-connectivity-service-end-point-spec (new)
    - media-channel-connectivity-service-end-point-spec
    - otsi-mcg-connectivity-service-end-point-spec (new)
    - otsi-mc-connectivity-service-end-point-spec (new)
    - media-channel-connection-end-point-spec
    - otsi-mc-connection-end-point-spec (new)
    - mc-cep-pac, ots-cep-pac, oms-cep-pac, physical-cep-pac (all new)
    - media-channel-bw-config-pac (new)
    - media-channel-spectrum-pac
    - otsi-mc-config-pac (new)
    - otsi-mc-bw-config-pac (new)
    - otsi-mc-freq-config-pac (new)
    - mc-cep-pac (new)
4. Classes removed:
    - otsi-assembly-connection-end-point-spec
    - otsia-connectivity-service-end-point-spec
    - ots-connection-end-point-spec
    - media-channel-assembly-spec
    - mca-connectivity-service-end-point-spec
5. Moved to TapiOdu all FEC related definitions.
6. identity PHOTONIC_LAYER_QUALIFIER, deprecated in 2.1.3, removed in 2.3:
    - PHOTONIC_LAYER_QUALIFIER_OTSiG
    - PHOTONIC_LAYER_QUALIFIER_NMC
    - PHOTONIC_LAYER_QUALIFIER_NMCA
    - PHOTONIC_LAYER_QUALIFIER_SMC
    - HOTONIC_LAYER_QUALIFIER_SMCA
7. identity PHOTONIC_LAYER_QUALIFIER, deprecated in 2.3:
    - PHOTONIC_LAYER_QUALIFIER_OTSiA
    - PHOTONIC_LAYER_QUALIFIER_OTSiMCA

    - PHOTONIC_LAYER_QUALIFIER_MCA
    - PHOTONIC_LAYER_QUALIFIER_OMSA
    - PHOTONIC_LAYER_QUALIFIER_OTSA
8. identity PHOTONIC_LAYER_QUALIFIER, defined in 2.3:
    - PHOTONIC_LAYER_QUALIFIER_OTSi
    - PHOTONIC_LAYER_QUALIFIER_OTSiMC
    - PHOTONIC_LAYER_QUALIFIER_MC
    - PHOTONIC_LAYER_QUALIFIER_OCH
    - PHOTONIC_LAYER_QUALIFIER_OMS
    - PHOTONIC_LAYER_QUALIFIER_OTS
    - PHOTONIC_LAYER_QUALIFIER_OTS_OMS
9. *modulation-technique* type now has two attributes
    - *standard-modulation-technique*
    - *proprietary-modulation-technique*