Updated Common TE Types

TEAS WG, IETF 113, Vienna+Virtual

draft-busi-teas-te-types-update-01

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Motivation

• Need to support tiny and backward compatible updates on the ietf-te-types YANG module already published in RFC 8776
  – Just defining a new typedef and a new grouping

• Issues with RFC 8776-bis approach
  – RFC 8776 is an 84 pages long RFC (pdf version)
  – RFC 8776 contains other YANG modules that do not need to be updated
    – The content is quite mature since moved from mature WG documents (some of which are ready for WG LC)
    – Need to be fast not to delay the progress of other WG documents
What is needed

• New typedef: bandwidth-scientific-notation
  – Defined in draft-ietf-teas-yang-l3-te-topo
  – Broader applicability
    • Not only limited to Packet TE Topology model
    • Not only limited to packet technologies

• New grouping: encoding-and-switching-type
  – Defined in draft-ietf-teas-yang-path-computation
    • Attributes copied from draft-ietf-teas-yang-te (for alignment)
  – Moved to draft-ietf-teas-yang-te
    • Imported by draft-ietf-teas-yang-path-computation
    • Alignment guaranteed by using a common grouping
  – Broader applicability
    • Not only limited to TE tunnel and Path Computation models
Proposed Approach

Note: semver label applied to the YANG modules to simplify the drawing
Issues and proposed resolution

• Limit the scope of work only to the tiny and backward compatible updates
  – Include in the main body of the RFC text only the proposed changes

• Compatibility with YANG toolchain (e.g., rfcstrip)
  – Include the whole module revision within an Appendix (out of scope for the review/comments)

• Ensure alignment between the changes in the main body and the module revision in the appendix
  – Generate the text in the main body via automatic (simple) diff tool
Next Step

• Get feedbacks from Netmod WG and ADs on the process
  – Is the proposed process of updating an existing YANG module reasonable?
• Get feedbacks from TEAS WG on the technical content
  – Review the typedef and grouping definitions
• If the proposed approach is accepted:
  – Ready for TEAS WG adoption (hopefully soon)
  – Keep updating the draft based on the comments
  – Align dependent WG I-Ds
    • draft-ietf-teas-yang-te
    • draft-ietf-teas-yang-path-computation
    • draft-ietf-teas-yang-l3-te-topo
  – Ideally to go in WG LC together with the first dependent WG I-D
Backup
Keep current status

RFC 8776

ietf-te-types (v1.0.0)

ietf-te-packet-types (v1.0.0)

imports

ietf-l3-te-topology (v1.0.0-draft)

ietf-te (v1.0.0-draft)

ietf-te-path-computation (v1.0.0-draft)
Issues with current status

• Defeating the value of common types modules
  – Trying to complete the common types would delay the process for work which is mature
  – Publishing common types step-by-step would cause spreading the additional common types in multiple modules just to avoid the process of updating the old version of common types
New YANG module

RFC 8776
- ietf-te-types (v1.0.0)
- ietf-te-packet-types (v1.0.0)

New I-D
- ietf-te-types-ext (v1.0.0-draft)

imports

ietf-l3-te-topology (v1.0.0-draft)
ietf-te (v1.0.0-draft)
ietf-te-path-computation (v1.0.0-draft)
Issues with new YANG module

• Defeating the values of YANG module revisions
  – Proliferation of YANG modules providing few common types
    • ietf-te-types
    • ietf-te-types-ext
    • ietf-te-types-ext-ext
    • ...

RFC 8776-bis

RFC 8776
- ietf-te-types (v1.0.0)
- ietf-te-packet-types (v1.0.0)

RFC 8776-bis
- ietf-te-types (v1.1.0-draft)
- imports

ietf-l3-te-topology (v1.0.0-draft)
ietf-te (v1.0.0-draft)
ietf-te-path-computation (v1.0.0-draft)

Replaces
Issues with RFC 8776-bis

• How to ensure fast standardization process?
  – Difficult to limit the scope of review/comments
  – Difficult to mark the changes
  – Need to develop a long document for tiny updates

• What to do with ietf-te-packet-types YANG module?
  – No changes are needed
  – RFC 8776 is obsoloted so needs to be republished?
  – The reference to RFC 8776 would break?
  – A new YANG revision that just updates the reference?