

A SNMP MIB to manage GMPLS with General Constraints support

draft-gmggm-ccamp-gencons-snmp-mib-02

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Outline

- Implement MIBS for GMPLS General Constrain information.
- It has roots in WSON documents but “General”: applicable to different data-plane technologies.
- A separate draft for MIBs on WSON specific information (not updated for this IETF but o TODO list).
- Mibs split follow same WG document split

WSON Doc(s)

General Constrains

- draft-ietf-ccamp-general-constraint-encode
- draft-ietf-ccamp-gmpls-general-constraints-ospf-te

WSON Specific Constrains

- draft-ietf-ccamp-rwa-wson-encode
- draft-ietf-ccamp-wson-signal-compatibility-ospf
- draft-ietf-ccamp-wson-signaling

draft-gmggm-ccamp-gencons-snmp-mib

draft-gmggm-ccamp-wson-snmp-mib

Background

- RFC4801
 - Definitions of Textual Conventions for GMPLS Management
- RFC4802
 - “Generalized Multiprotocol Label Switching (GMPLS) Traffic Engineering Management Information Base”
- RFC4803
 - “Generalized Multiprotocol Label Switching (GMPLS) Label Switching Router (LSR) Management Information Base”
- RFC6825
 - “Traffic Engineering Database Management Information Base in Support of MPLS-TE/GMPLS”

Gencons MIB content

- gmplsGenConsAvailableLabelsTable
- gmplsGenConsSharedBackupLabelsTable
- gmplsGenConsConnMatrixTable
- gmplsGenConsPortLabelRestrictionTable

- ✓ Current draft started with these two tables
- ✓ They have the same table entry:
{index, interface, ISCD, LabelValue}

Table behavior

- Definitions come from general-constrain-encode, but advertised through OSPF technology specific extensions.
- Specular behavior vs. the gmplsLabelTable (RFC4803):
 - Initialized as full (all labels available)
 - Entry removed as long as labels are used.

Open Question (1): ISCD

- Current type: IANAGmplsSwitchingTypeTC
 - required to identify type of data-plane a label is referring to
 - Q: index to tedSwCapTable (RFC6825) better? (not all the fields in such table are required).
- RFC4802 : IANAGmplsSwitchingTypeTC
 - RFC4802 is an INTEGER but with only the old-set of values.
 - Q: Need update to new types (e.g. 110 / 151) or just take as an integer? If need updates, how?

Open Question (2) Label Value

- RFC4803 already define a label table so...
- Back to RFC4801 definitions:
 - GmplsLabelTypeTC, Does types needs updates?
 - E.g. gmplsLabelPortWavelength (integer 32 bits) may map on wavelength labels (RFC6205)
 - Likely on the GmplsFreeformLabelTC accommodate more than 32 bits (e.g. flexgrids?)

Next Steps

- Solicit input from WG (please comment)
- Plan to solve current open questions.
- Progress also on draft-gmggm-ccamp-wson-snmplib

Thank You!