

ICC Based TLVs for MPLS-TP OAM Functions

draft-cui-mpls-tp-oam-tlv-icc-00.txt

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Background

- Two of the drafts have been presented at IETF 83.
 - draft-cui-mpls-tp-cc-cv-rdi-id-00
 - draft-cui-mpls-tp-on-demand-cv-id-00
- This draft has replaced above two drafts and has extend the scope to all OAM Functions of the MPLS-TP.

Motivation

- Today, two sets of identifiers are defined in MPLS-TP such as Global_ID based (RFC 6370) and the ICC_Operator_ID based (RFC 6923).
- An Operator MAY be identified either by its Global_ID or by its ICC_Operator_ID.
- The sets of MPLS-TP OAM SHOULD supports the ICC_Operator_ID if it used in the Operator that is identified by ICC_Operator_ID.

The Scope

- This document specifies the extension for MPLS-TP OAM functions using ICC-based TLVs for the OAM toolset can be used in ICC-based transport networks, but does **NOT** change the behavior of existing OAM functions.

Extension TLVs for MPLS-TP OAM Functions

Proactive cc-cv-rdi

- ICC-Operator_ID based **Source MEP ID TLV**

On-demand CV and
Routing Trace

- ICC_Operator_ID-based **Source MEP ID TLV**
- ICC_Operator_ID-based **Destination ID TLV**
- ICC_Operator_ID-based **Static LSP sub-TLV**
- ICC_Operator_ID-based **Static Pseudowire sub-TLV**

Fault management

- **ICC_Operator_ID TLV**

Lock Instruct and
Loopback

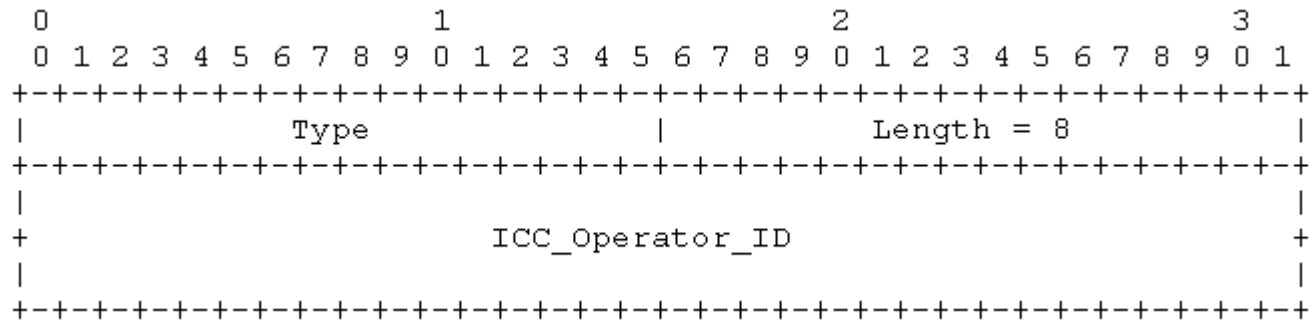
- ICC_Operator_ID-based **Source MEP ID TLV**

Packet Loss and Delay
Measurement

- No new TLVs

ICC_Operator_ID TLV

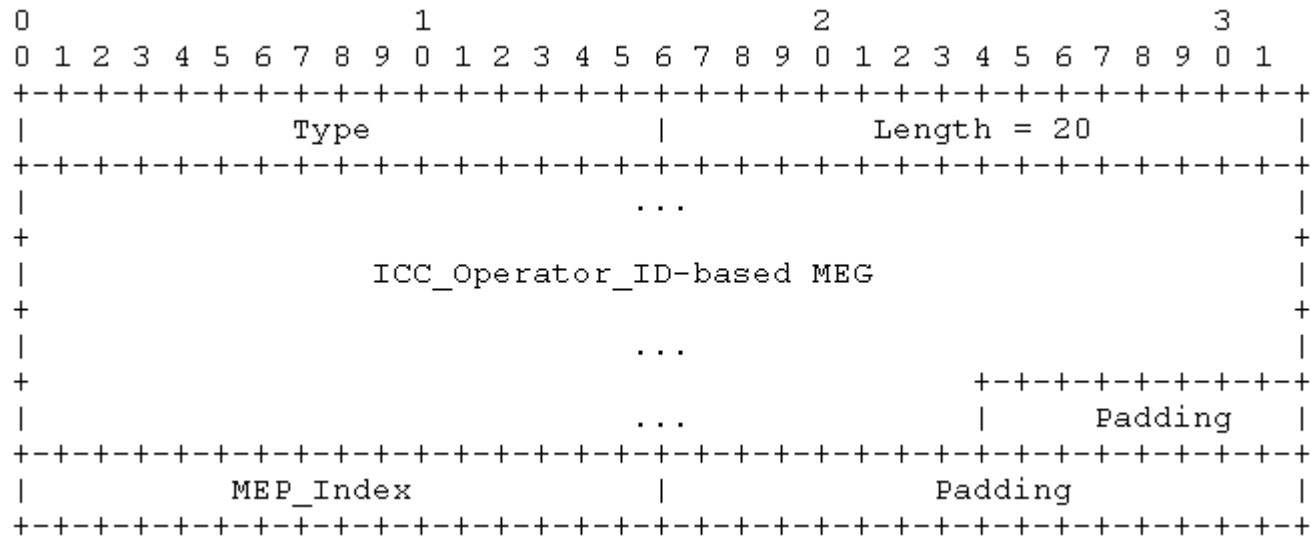
- In the ICC based network, this TLV is used for Fault Management Messages(see RFC6427) instead of the Global_ID TLV.
- The format of the TLV is as shown below.



ICC_Operator_ID TLV Format

ICC_Operator_ID-based Source MEP-ID TLV

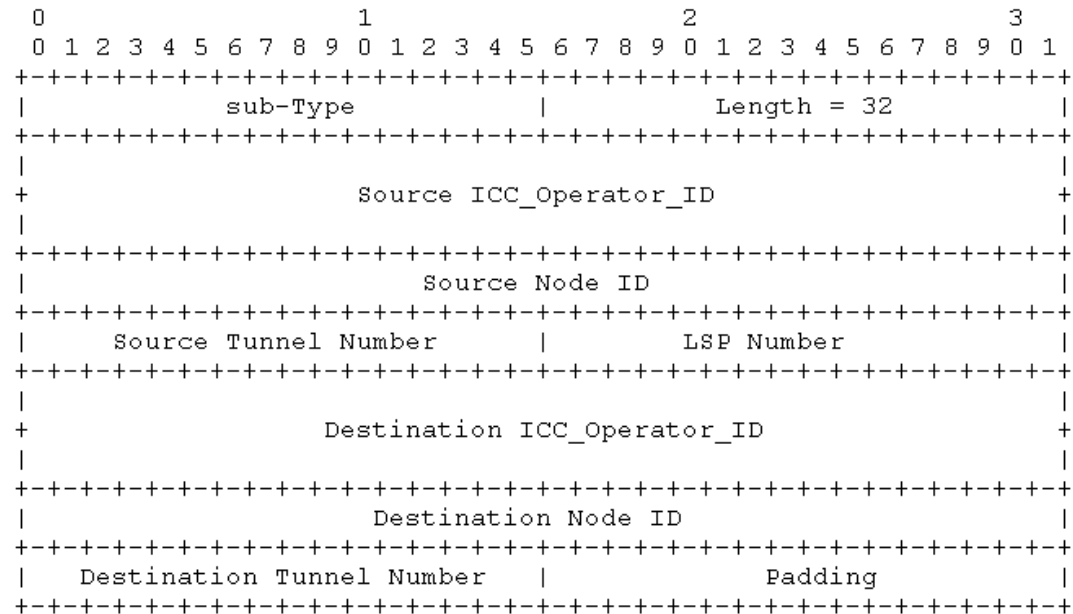
- In the ICC based network, this TLV is used for MPLS-TP CV Message(see RFC6428) instead of the Source MEP-ID TLV based on IP conventions.
- The format of the TLV is as shown below.



ICC_Operator_ID-based Source MEP ID TLV Format

ICC_Operator_ID-based Source / Destination ID TLV

- In the ICC based network, this TLV is used for On-Demand CV Packet(see RFC6426) instead of the Source / Destination ID TLV based on IP conventions.
- The format of the TLV is as shown below.



ICC_Operator_ID-based Source / Destination ID TLV Format

ICC_Operator_ID-based Static LSP / Pseudowire sub-TLV

- In the ICC based network, this TLV is used for On-Demand CV Packet(see RFC6426) instead of the Static LSP sub-TLV / Static Pseudowire sub-TLV based on IP conventions.
- The format of the TLV is as shown below.

```
+-----+
|                                     |
|               Service Identifier   |
|                                     |
+-----+
|                                     |
|               Source ICC_Operator_ID
|                                     |
+-----+
|               Source Node ID
|                                     |
+-----+
|               Source AC-ID
|                                     |
+-----+
|               Destination ICC_Operator_ID
|                                     |
+-----+
|               Destination Node ID
|                                     |
+-----+
|               Destination AC-ID
|                                     |
+-----+
```

ICC_Operator_ID-based Static LSP / Pseudowire sub-TLV Format

Next Steps

- Solicit comments or suggestions from wg.