

# LDP Extensions for Multi Topology Routing

**`draft-ietf-mpls-ldp-multi-topology-01.txt`**

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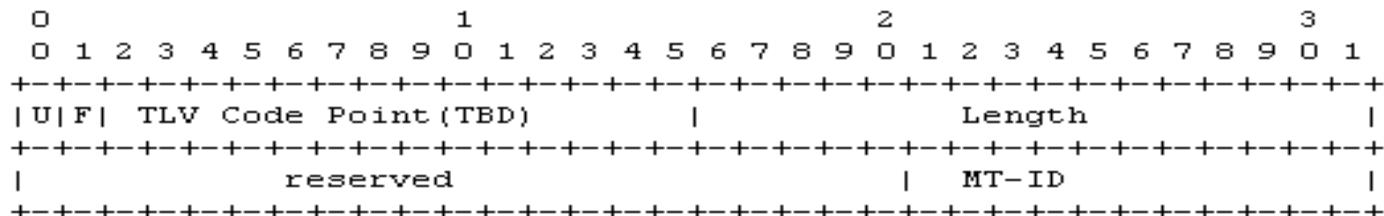
# Updates in the draft

- Thanks for the comments from Eric Rosen and Daniel King
- New author Kamran Raza has joined this work.
- The main updates in the drafts:
  - Cleaned up significant portions of text by removing the discussion related to the forwarding for readability and streamlining the draft.
  - Added a Manageability Considerations section.
  - Added Requirements Language and used language across various sections of the document.
  - MT Applicability on FEC-based features section is added.
  - Updated the references, especially the new LDP specification draft (RFC5036) which recently replaced RFC3036.
- The main pending issues for the current version of the draft: The choices of MPLS Multiple Topology ID representation

# Updates in the draft

- MPLS Multiple Topology ID representation Option 1 : define a new TLV for MT-ID

The new TLV for MT-ID is defined as below:



where:

U and F bits:

As specified in [[RFC5036](#)].

TLV Code Point:

The TLV type which identifies a specific capability.

MT-ID is a 12-bit field containing the ID of the topology corresponding to the MT-ID used in IGP and LDP. Lack of MT-ID TLV in messages MUST be interpreted as FECs are used in default MT-ID (0) only.

A MT-ID TLV can be inserted into the following LDP messages as an optional parameter.

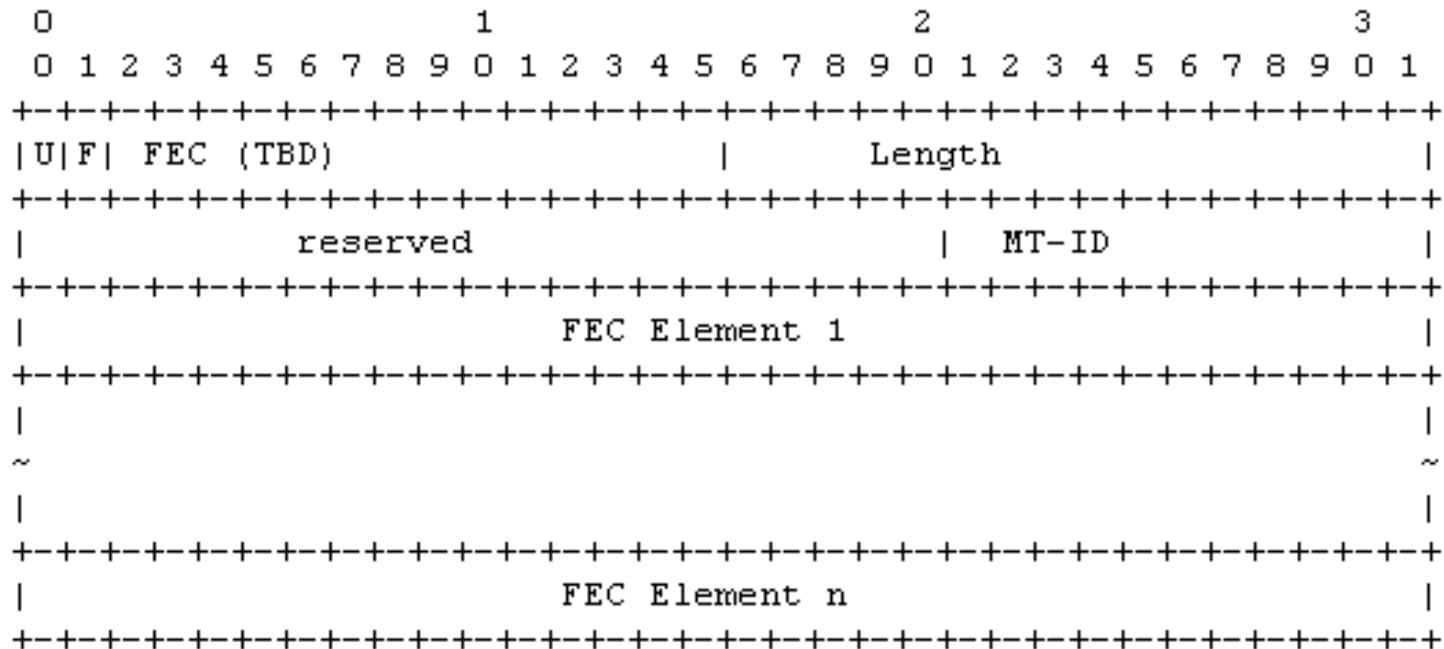
## Updates in the draft

- Label Mapping Message Example using MPLS Multiple Topology ID representation Option 1:

The encoding for the Label Mapping message is:

# Updates in the draft

- MPLS Multiple Topology ID representation Option 2: define a new FEC TLV type



This new FEC TLV may contain a number of FEC elements and a MT-ID. It associates these FEC elements with the topology identified by the MT-ID. Each FEC TLV can contain only one MT-ID.

# Updates in the draft

- Label Mapping Message Example using MPLS Multiple Topology ID representation Option 2:

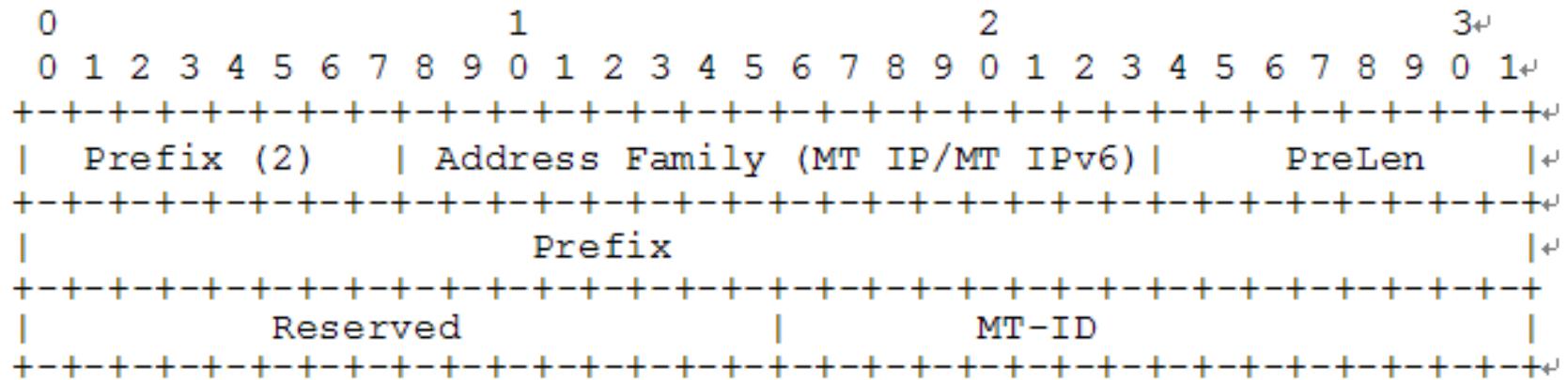
The encoding for the Label Mapping message is:

0	1	2	3																				
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1		
0  Label Mapping (0x0400)												Message Length											
												Message ID											
												New FEC TLV defined for MT											
												Label TLV											
												other optional Parameters											

# Updates in the draft

- MPLS Multiple Topology ID representation Option 3: define new address families to represent the prefixes associated to a specific topology. (The details of this option will be added into the next version of the draft)

For MT LDP, the "Prefix" FEC element's "Address Family" will be set to "MT IP" or "MT IPv6", and the FEC element will be encoded as follows:<sup>4</sup>



# Updates in the draft

- Label Mapping Message Example using MPLS Multiple Topology ID representation Option 3:

The encoding for the Label Mapping message is:

0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1
0  Label Mapping (0x0400)										Message Length											
Message ID																					
FEC TLV consists of new FEC Element (MT address family+MT-ID)																					
Label TLV																					
Other Optional Parameters																					

# Next Steps

- The authors will update the draft to include the details of the third option for the representation of MPLS Multiple Topology ID.
- The authors request WG experts to review and comment on the three choices of the representation of MPLS Multiple Topology ID.

Questions  
&  
Comments?

Thanks!