

# PCEP Extension for SR-MPLS Entropy Label Position

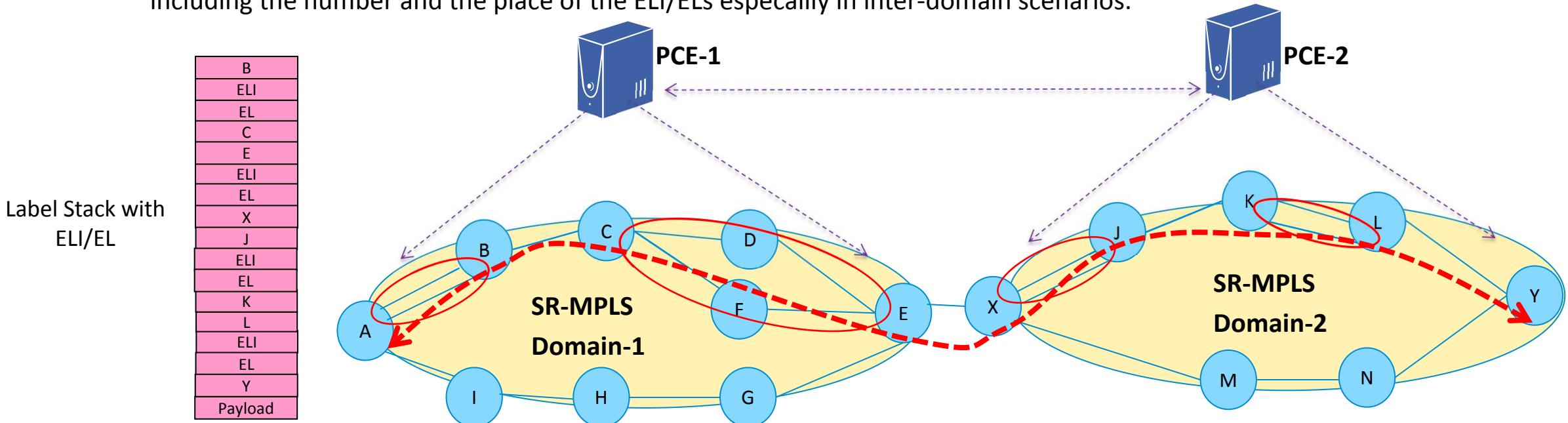
`draft-peng-pce-entropy-label-position-03`

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# Overview

- RFC8662 proposes to apply the entropy labels to SR-MPLS networks and provides following criteria to determine the best ELI/ELs placement:
  - a limited number of <ELI, EL> pairs SHOULD be inserted in the SR-MPLS label stack;
  - the inserted positions SHOULD be whithin the Entropy Readable Label Depth (ERLD) of a maximize number of transit LSRs;
  - a minimum number of <ELI, EL> pairs SHOULD be inserted while satisfying the above criteria.
- The controller (e.g. PCE) MAY perform the end-to-end path computation as well as the the Entropy Label Position (ELP) including the number and the place of the ELI/ELs especailly in inter-domain scenarios.



# PCEP Extensions

- Open Object
  - indicate that it supports the SR path with ELP configuration.
- LSP Object
  - indicate to compute the SR path with ELP information.
- ERO Object
  - indicate that the position after this SR-ERO subobject is the position to insert <ELI, EL>, otherwise it cannot insert <ELI, EL> after this segment.

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 2 3 4 5 6 7 8 9 0	1
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
Type=TBD11	Length=4		
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
Reserved	Flags  E N X	MSD	
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+

Figure 1: E-flag in SR-PCE-CAPABILITY sub-TLV

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 2 3 4 5 6 7 8 9 0	1
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
PLSP-ID	Flag E C	O  A R S D	
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
//	TLVs	//	
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+

Figure 2: E-flag in LSP Object

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 2 3 4 5 6 7 8 9 0	1
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
L    Type=36       Length       NT       Flags    E F S C M			
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
SID (optional)			
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+
//	NAI (variable, optional)	//	
+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+	+-----+-----+-----+-----+

Figure 4: E-flag in SR-ERO subobject

# Next Step

- Comments and discussions are very welcome!

Thank you!