

R1 (PE)

R3 (P)

ldp\_wire\_atom\_ppp.pcapng

**LDP Hello Message**

ID LSR ID	10.0.0.1
Hold Time	90
Type	Hello
IPv4 Transport Address	10.0.0.1

LDP Hello – periodic UDP multicast (224.0.0.2) for neighbor discovery; discovered LSRs then open a TCP session to exchange labels and session parameters

**LDP Hello Message**

ID LSR ID	10.0.0.3
Hold Time	90
Type	Hello
IPv4 Transport Address	10.0.0.3

LDP Hello – periodic UDP multicast (224.0.0.2) for neighbor discovery; discovered LSRs then open a TCP session to exchange labels and session parameters

**LDP Hello Message**

ID LSR ID	10.0.0.1
Hold Time	90
Type	Hello
IPv4 Transport Address	10.0.0.1

LDP Hello – periodic UDP multicast (224.0.0.2) for neighbor discovery; discovered LSRs then open a TCP session to exchange labels and session parameters

**TCP (ACK)**

Source Port	29695
Destination Port	646
Stream index	0

Frame 4 | 2020-08-09T11:21:47.757605Z

**LDP Initialization Message**

ID LSR ID	10.0.0.3
-----------	----------

LDP Initialization – negotiates session parameters (keepalive timer, label advertisement mode: DU vs DoD, path vector limit); both LSRs must agree or session is torn down with a Notification

**MPLS Label 17**

EXP	6
Bottom	1
MPLS TTL	255

Frame 6 | 2020-08-09T11:21:47.774576Z

**LDP Initialization Message**

ID LSR ID	10.0.0.1
-----------	----------

LDP Initialization – negotiates session parameters (keepalive timer, label advertisement mode: DU vs DoD, path vector limit); both LSRs must agree or session is torn down with a Notification

**LDP Label Mapping Message**

ID LSR ID	10.0.0.3
ID LSR ID	10.0.0.3
FEC Element Type	Prefix FEC (2)
FEC Element Length	32
Label	3

LDP Label Mapping – advertises a local label binding for a FEC (prefix) to the peer; downstream LSR assigns labels and propagates upstream to build the LSP hop by hop

**LDP Label Mapping Message**

FEC Element Type	Prefix FEC (2)
FEC Element Length	24
Label	3

**LDP Label Mapping Message**

FEC Element Type	Prefix FEC (2)
FEC Element Length	32
Label	17

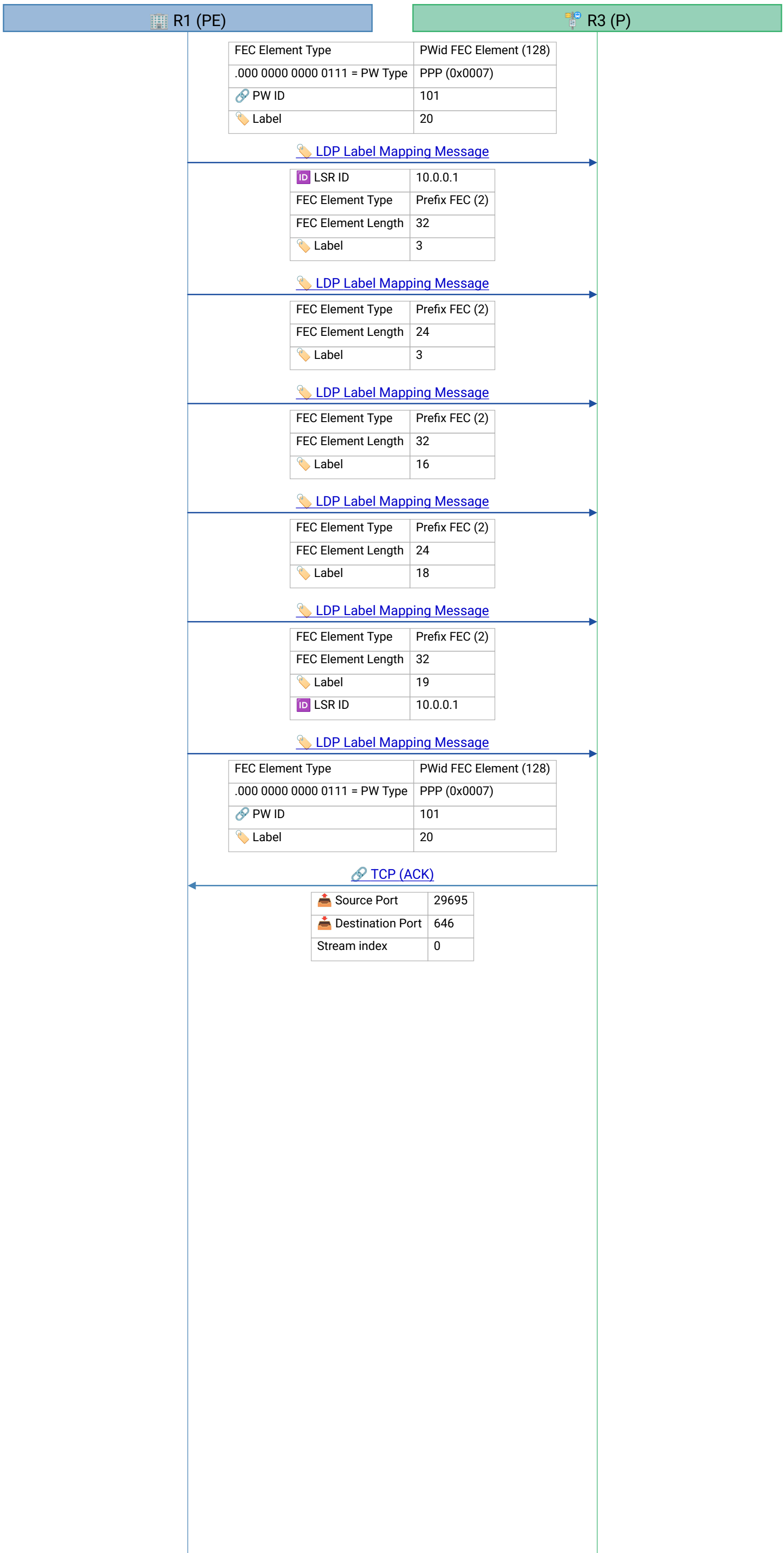
**LDP Label Mapping Message**

FEC Element Type	Prefix FEC (2)
FEC Element Length	32
Label	18

**LDP Label Mapping Message**

FEC Element Type	Prefix FEC (2)
FEC Element Length	24
Label	19

**LDP Label Mapping Message**



💡 LDP Label Mapping – advertises a local label binding for a FEC (prefix) to the peer; downstream LSR assigns labels and propagates upstream to build the LSP hop by hop

Frame 10 | 2020-08-09T11:21:48.038354Z