L3DL

Layer 3 Discovery & Liveness

draft-ietf-lsvr-l3dl-06

LSVR WG

2020.07.30

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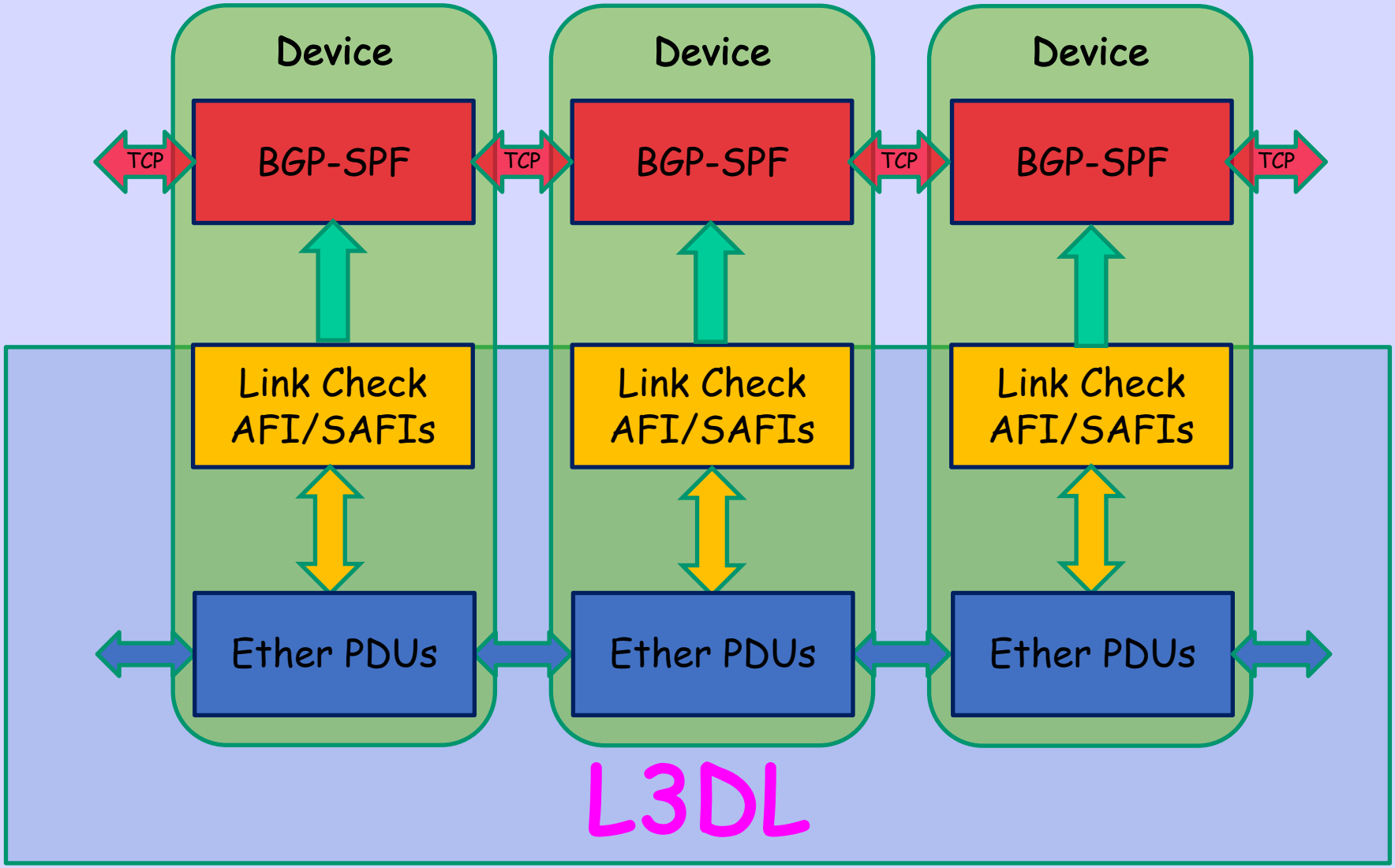
Primary Goal

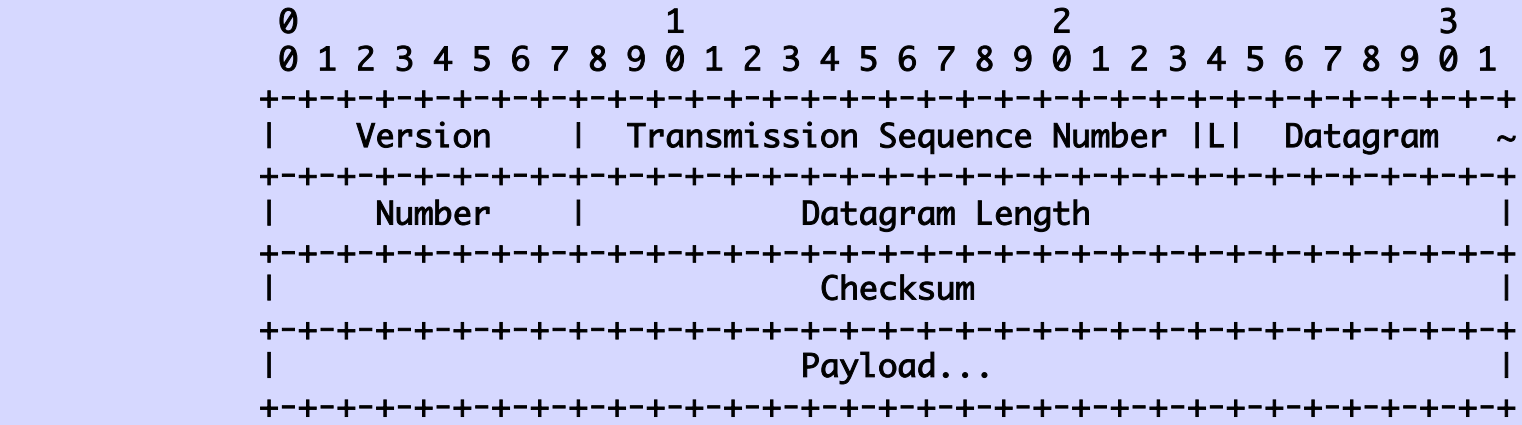
Layer 3 Topology Discovery and Liveless for LSVR / BGP-SPF

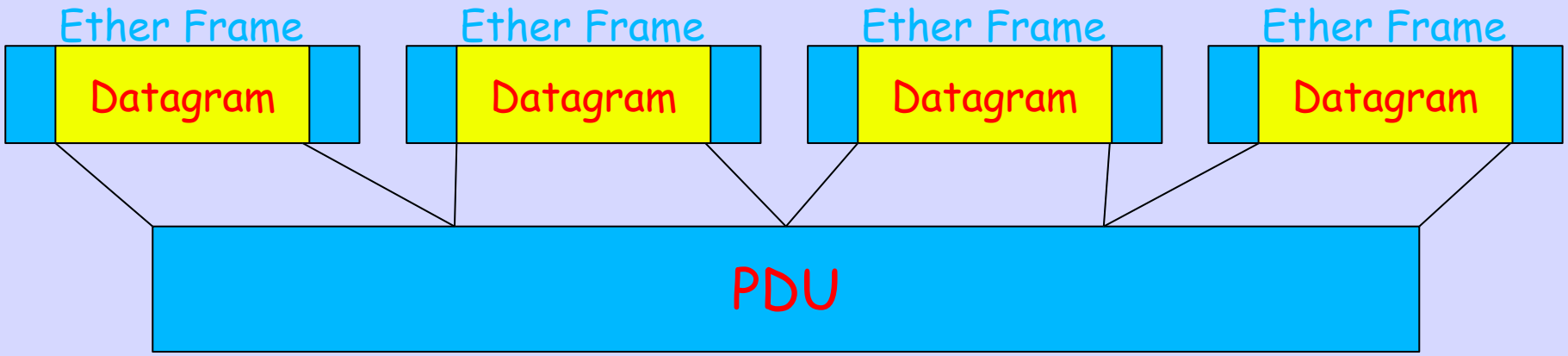
Just a Reminder

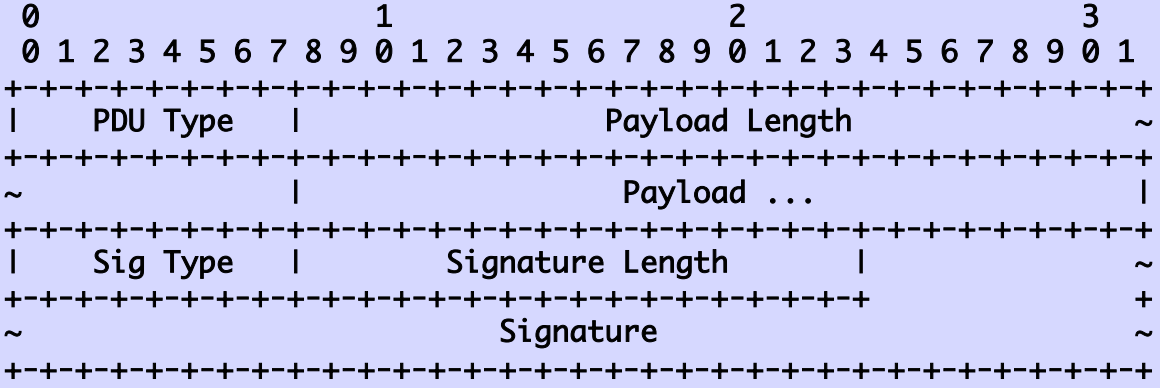


This is NOT a Routing Protocol

Discovers the Layer 3 Addresses on a PointToPoint Link







Jörg Ott did a Very Helpful Transport Directorate Early Review

You Read the Draft

Then why did you not report the bugs Rob did yesterday?

-06 Published
No Significant Change

We have Two Implementations One Python3 (LSOE) One in Golang

L3DL-Signing

Layer 3 Discovery and Liveness Signing

draft-ietf-lsvr-l3dl-signing

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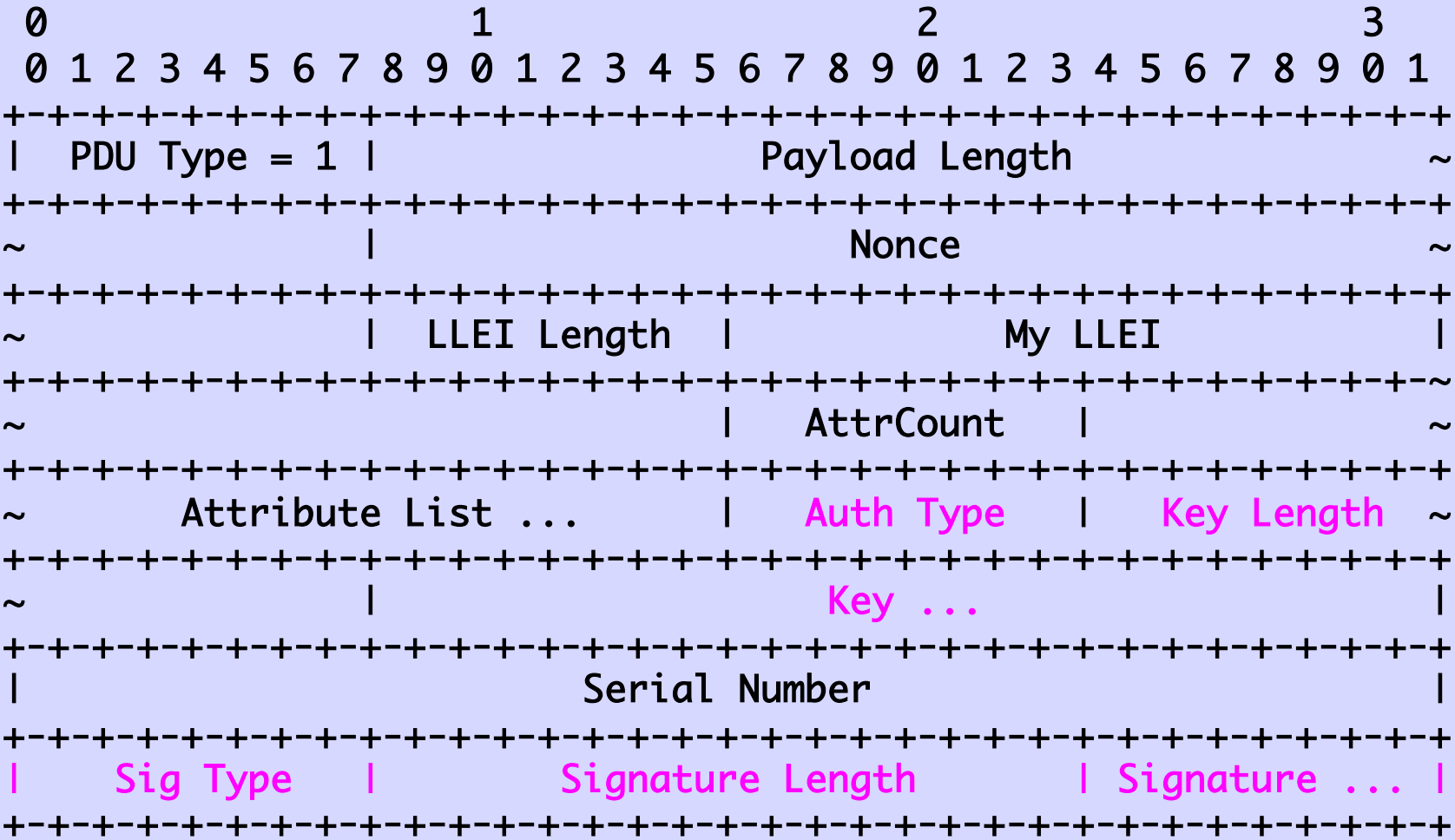
OPEN PDU



PDU Sender Signing

- The Key in the OPEN PDU SHOULD be the public key of an asymmetric key pair.
- The sender signs with the private key, of course.
- The device sending the OPEN may use one key for all links, a different key for each link, or some aggregation(s) thereof

Trust on First Use (TOFU)

- The OPEN key is generated on the sending device
- It is believed without question by the receiver
- Used to verify all subsequent PDUs from the same sender with the same Key Type.

PKI-Based Keying

- An enrollment step is performed.
- The public key is put into a certificate, which is signed by the the operational environment's trust anchor.
- The relying party can be confident that the public key is under control of the identified L3DL protocol entity.

Do Not Be Afraid

This is NOT X.509

- These need not be X.509 certificates
- X.509 is much more complicated than we need
- They are just signatures of one key (the session key supplied in the Key field of the OPEN PDU) by another key (the trust anchor)
- Every device must have TA burned in

Verify is the Same

- The two methods are indistinguishable
- The key provided in the OPEN PDU is used to verify the signatures of subsequent PDUs.
- The difference that PKI-based keys may be verified against the trust anchor when the OPEN PDU is received.

The Choice of Which Keying is Left to the Operator

WG Last Call was Requested Datatracker does not show WGLC

L3DL-ULPC
Upper Layer Protocol Configuration
draft-ietf-lsvr-l3dl-ulpc-00

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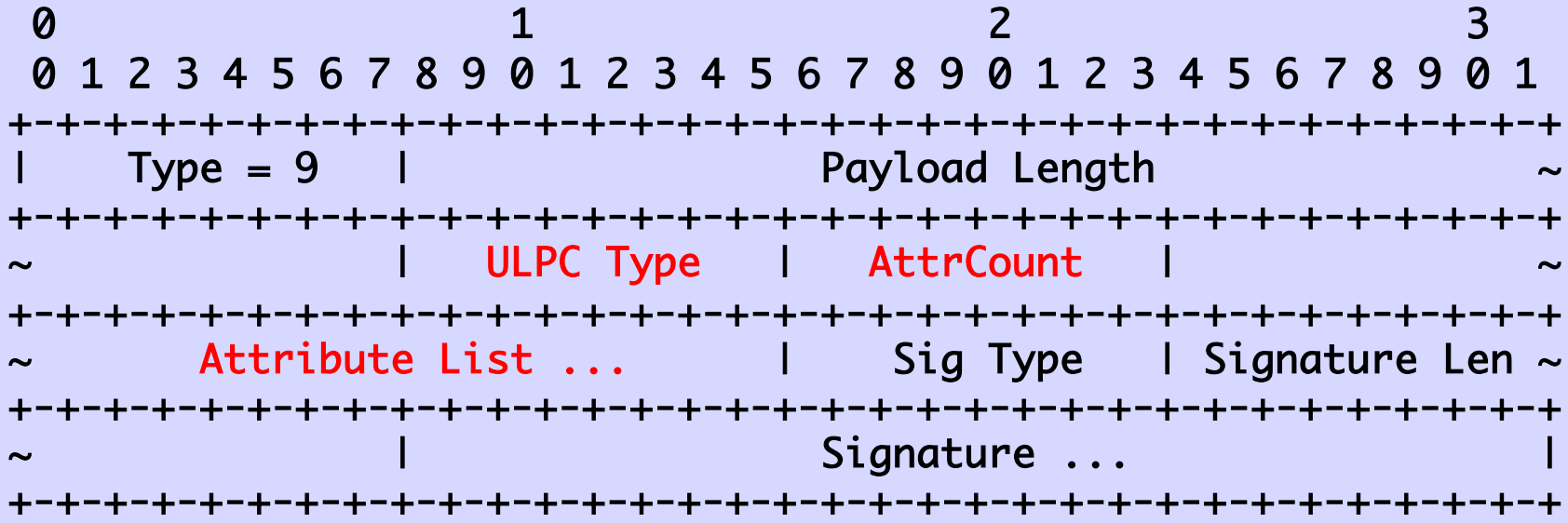
L3DL PDU for ULPC

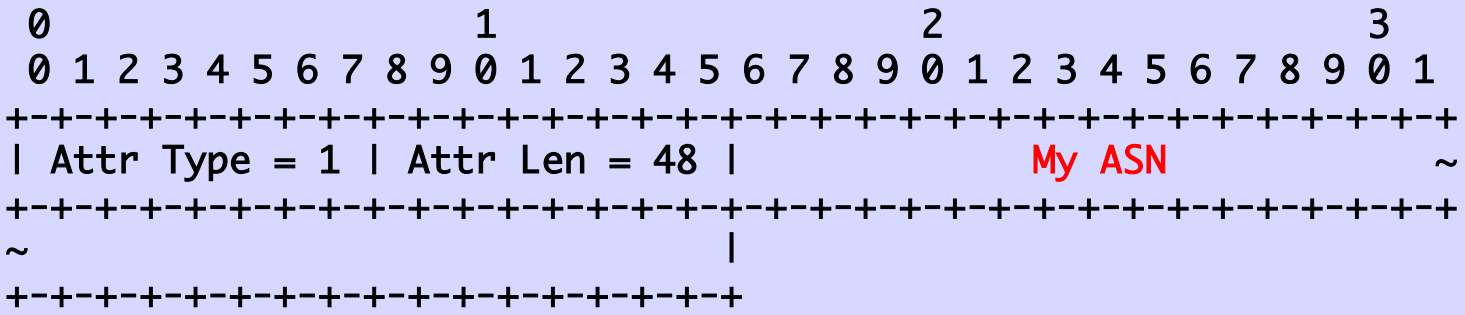


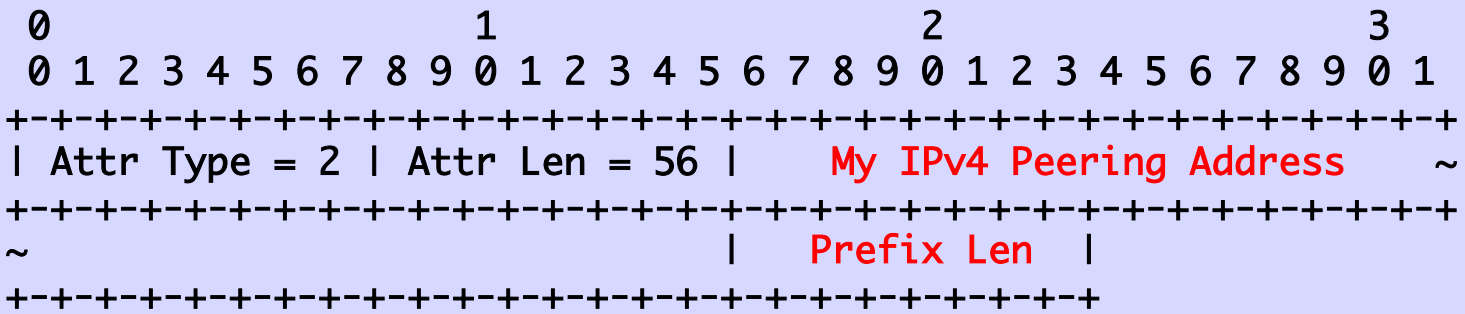
Provide the minimal set of configuration parameters for BGP OPEN to succeed

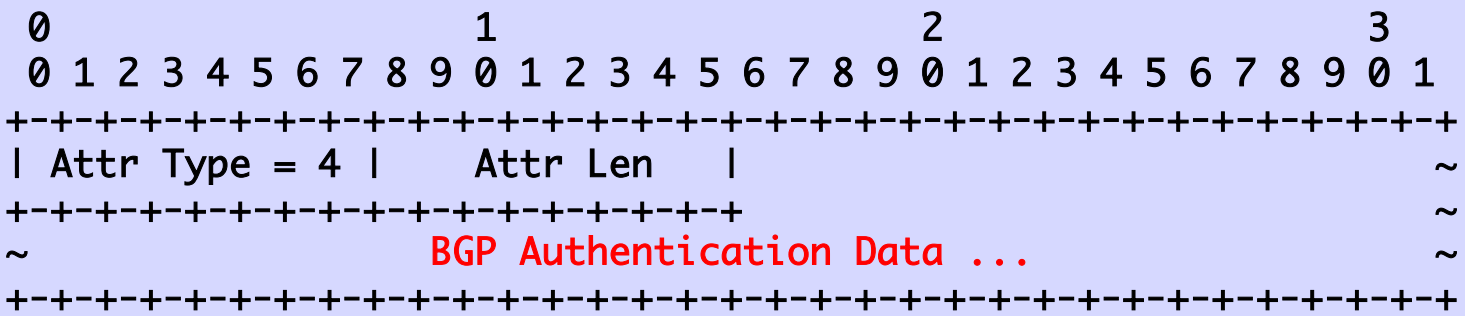
Not to replace or conflict with data exchanged by BGP OPEN

Multiple sources of truth are a recipe for complexity and pain

ULPC for BGP







Yes, there is one for IPv6 ☺

Requested WGLC DataTracker does not show it

And For Dessert

An Ops Hack (not a draft) At Layer 3 With L3DL