

Architecture Discussion on SRv6 Mobile User plane

[draft-kohno-dmm-srv6mob-arch-03](#)

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Agenda

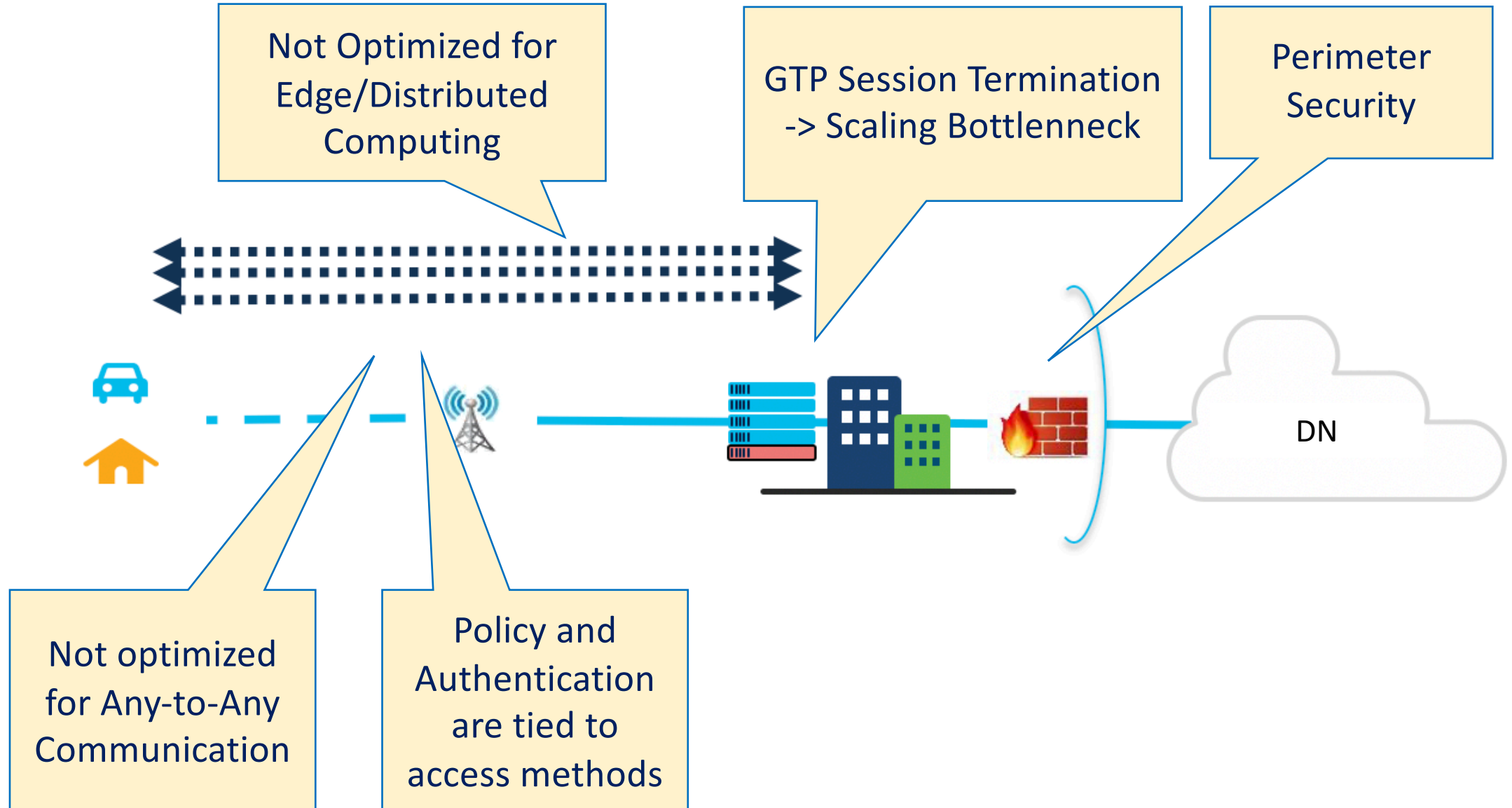
- Objective
- Architecture Discussion
- Exemplification
 - Network Slicing and Edge Computing
 - URLLC and Multi-path
- Conclusion and Next step

Objective

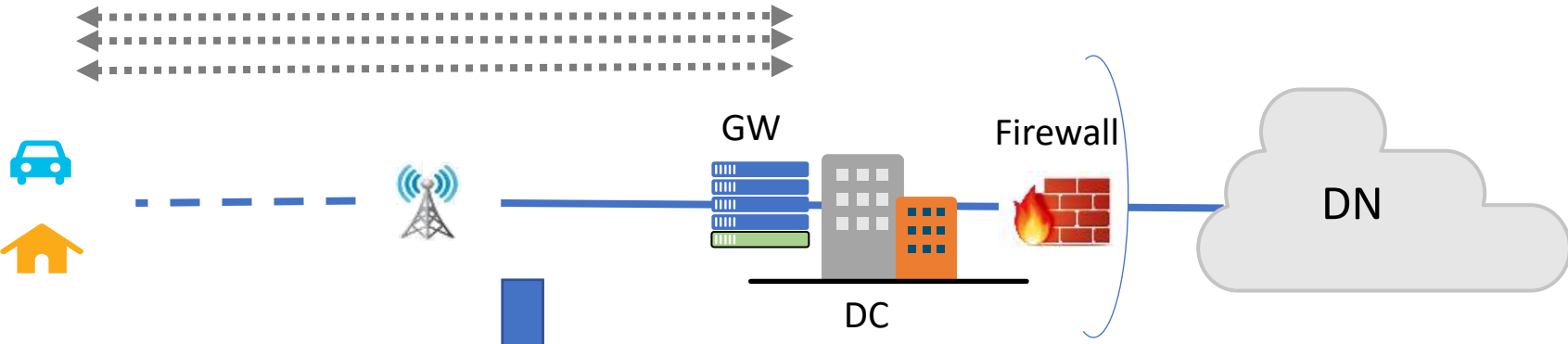
- This document discusses a solution approach and its architectural benefits of common data plane across domains and across layers.

(The current Mobility related discussions in IETF, e.g. Network Slicing, are based on the assumption of the existing domain and the current GTP.)

The limitation of the connection intensive network

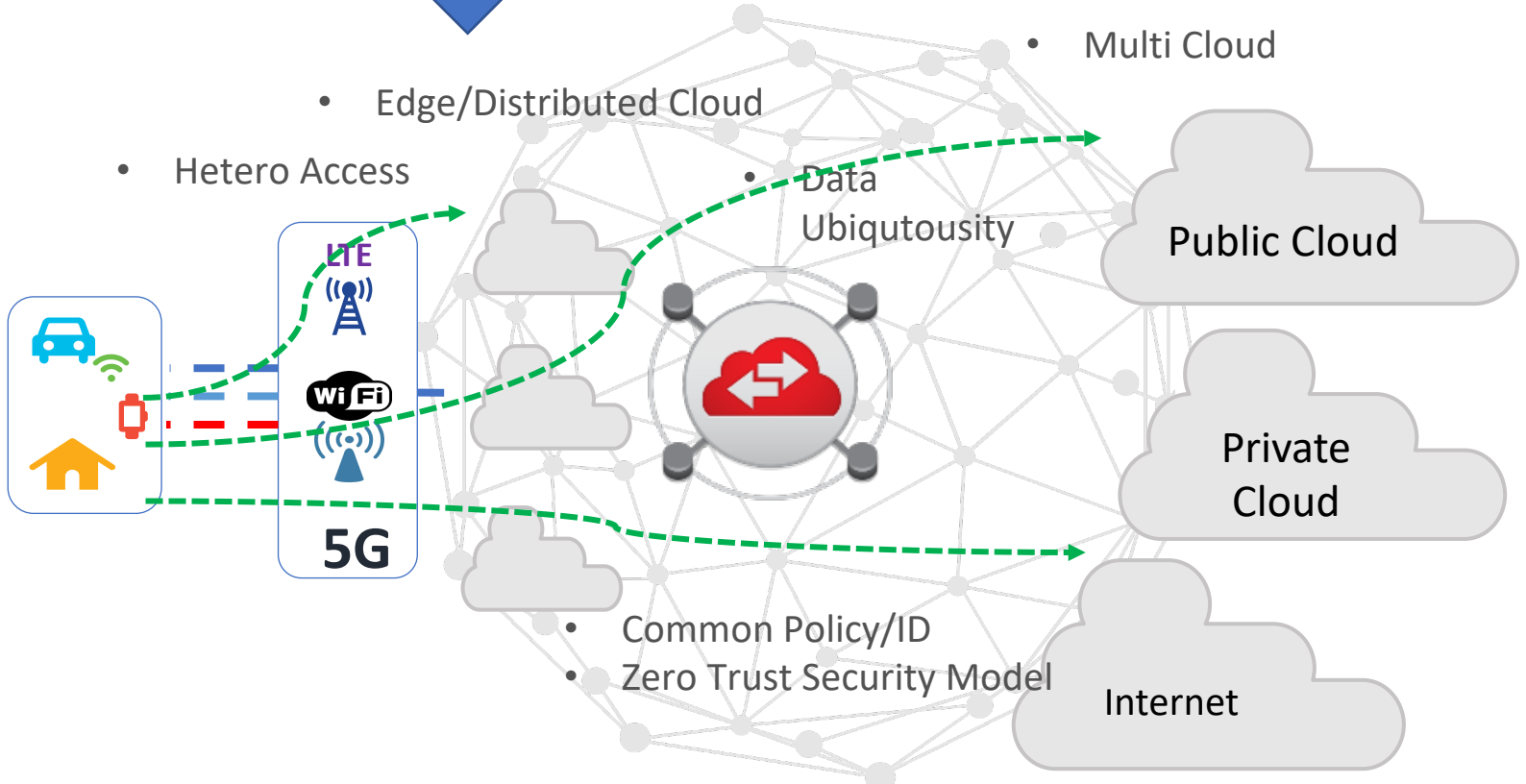


Toward Distributed Mobile Network

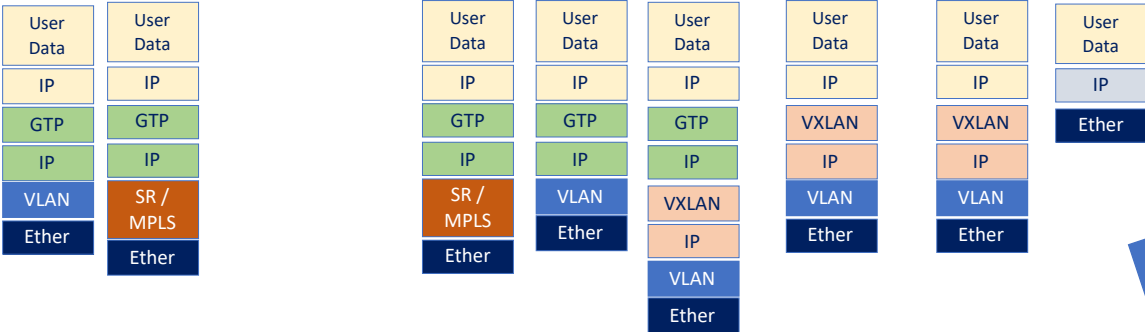
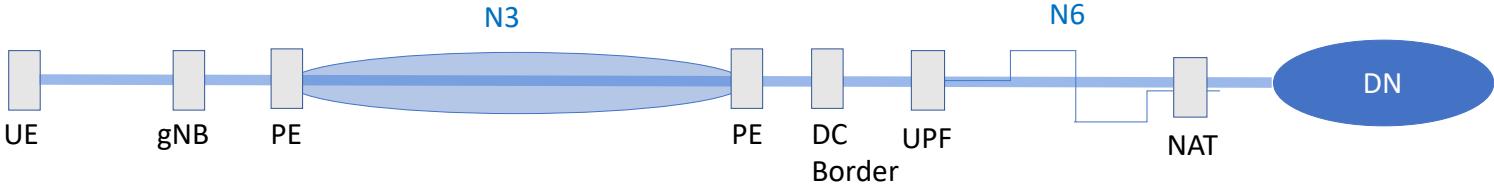


As is

To be



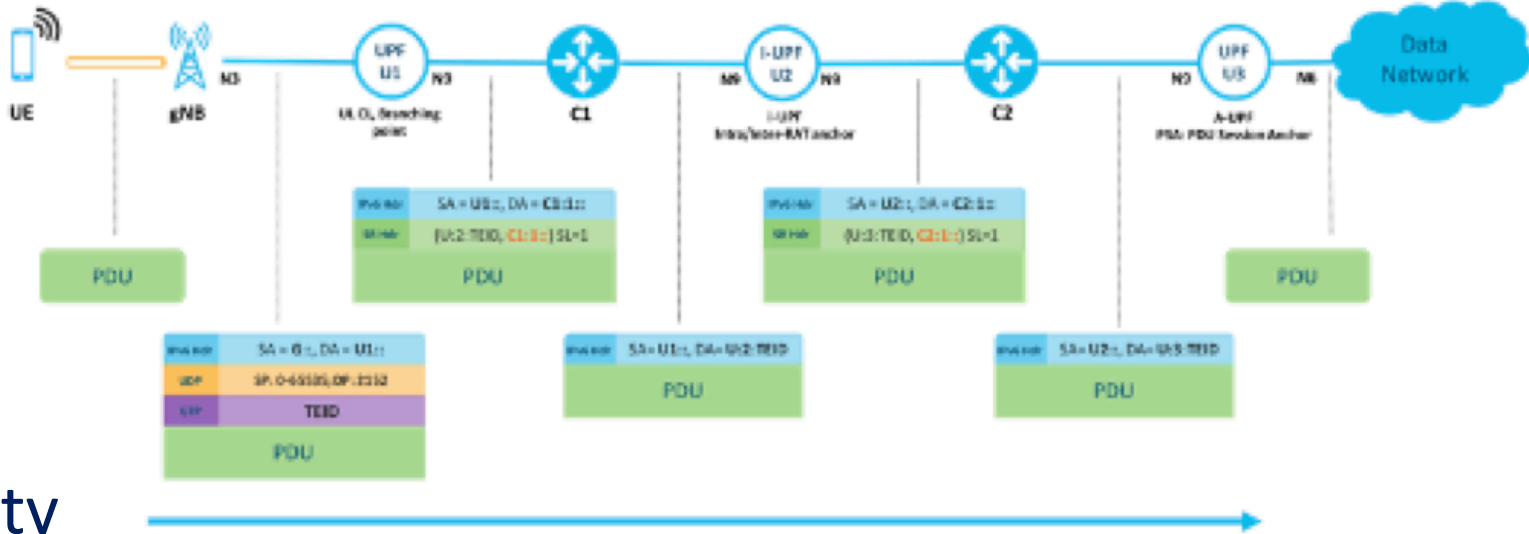
SRv6 – as a common dataplane across domains



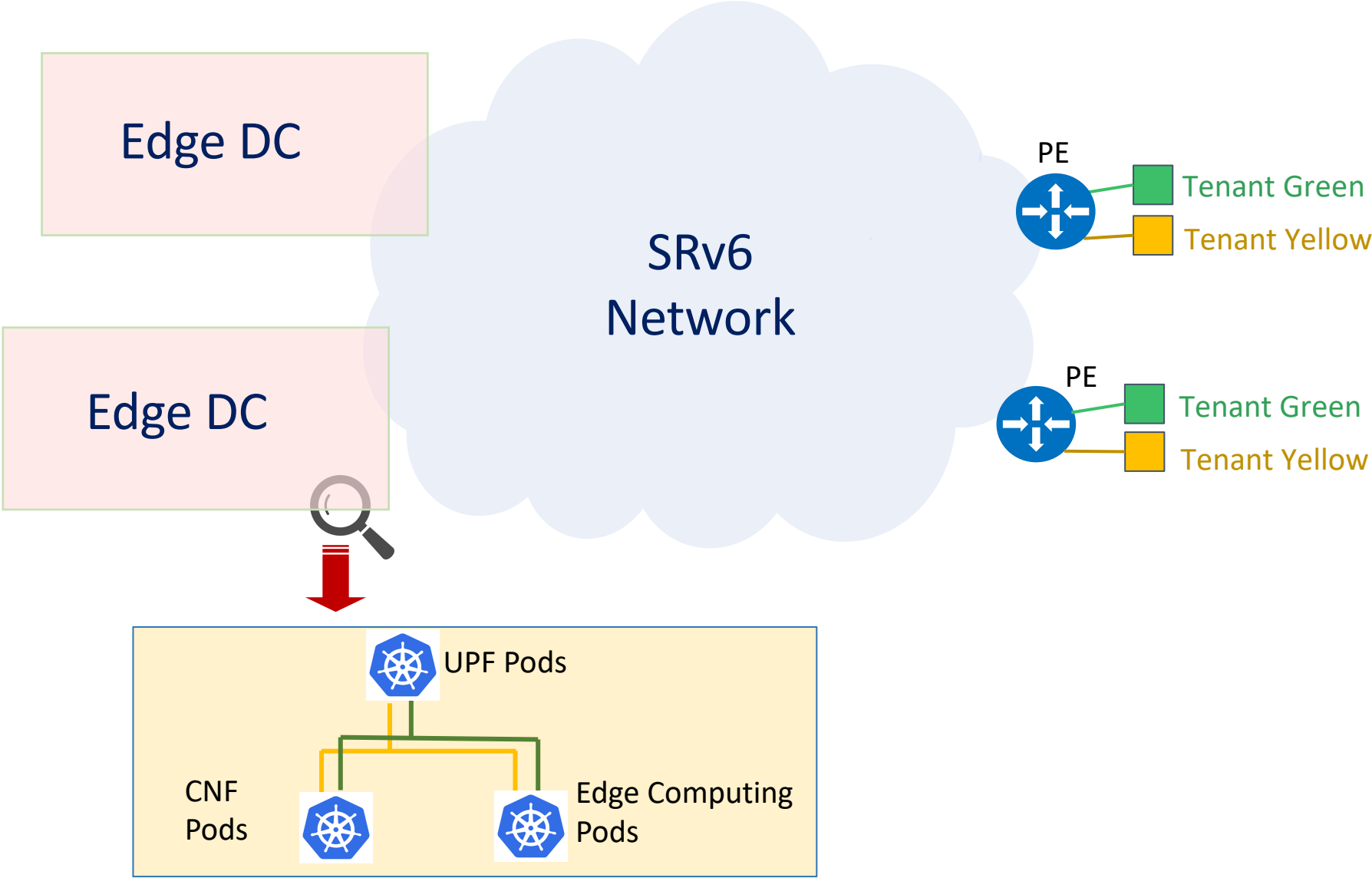
By SRv6 net program (RFC8986), it can program anything, including overlay functionalities such as GTP, VXLAN, NSH..



- Simple
- Flat
- Common Data Plane
 - Across domains
 - Overlay/Underlay
 - Interaction with App
- With scaling and flexibility

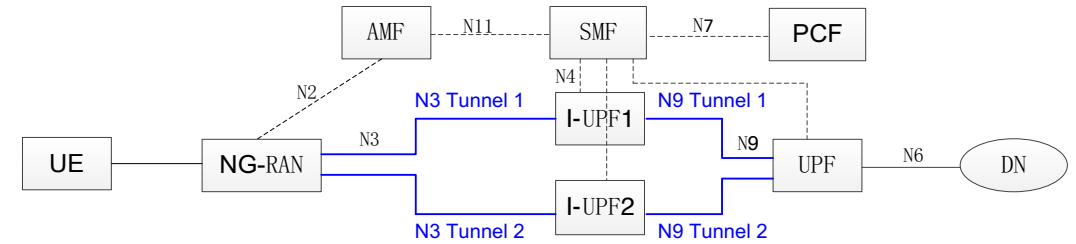


Edge Computing and Network Slicing

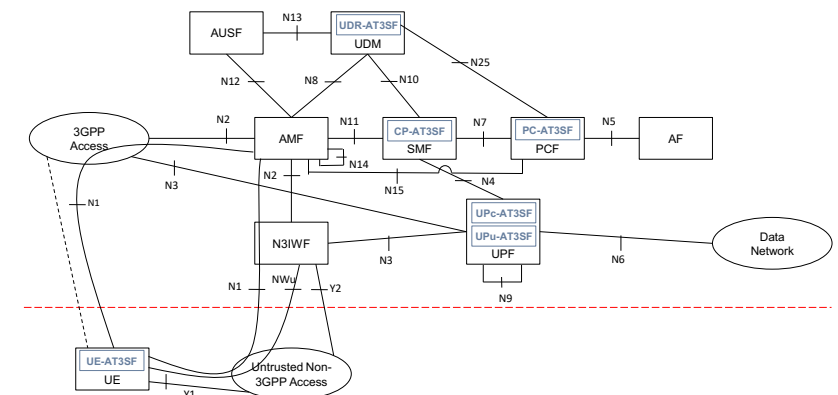


URLLC and Multi-path

- 3GPP [[TR.23725](#)] Section 6.4 addresses the issues on how to support redundant data transmission
- 3GPP [[TR.23793](#)] discusses multi-path and access traffic steering, switch and splitting support
- But these reliability and multi-path convergence should be better not completed within GTP. L4-L7 and Application interaction should be more considered.



3GPP TR 23.725 Figure 6.4.1-2 Two N3 and N9 tunnels between NG-RAN and UPF for redundant transmission



3GPP TR 23.793 Figure 6.1-1: Initial high level view of non-roaming ATSSS architecture

Conclusion and Next step

- As mobile architecture entities become more distributed, they have the potential to be integrated as the platforms for edge/distributed computing and new SLA delivery mechanisms, but for that, it is essential to consider this across domains and across layers.
- The current Mobility related discussions in IETF (e.g. Network Slicing) are based on the assumption of the existing domain and the current GTP.
- DMM WG adoption?

SR based network slicing drafts:

- [draft-ali-spring-network-slicing-building-blocks-04](#)
- [draft-filsfils-spring-srv6-stateless-slice-id-02](#)