

Transport Network Aware Mobility for 5G draft-clt-dmm-tn-aware-mobility-08 Nov 2020, IETF 109 DMM Session

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What is being solved (Recap..)

IETF109, Bangkok (Virtual), Nov 2020

Background

REL15: TS23.501/502 specify 5G architecture and procedures for UE mobility, which in addition to 4G-like mobility (SSC mode 1), also specifies SSC mode 2 (PDU session break before make) and SSC mode 3 (PDU session make before break).

Problems

- 1. No transport network awareness -with various SSTs (eMBB, URLLC, MIOT):
 - different traffic characteristics needing low and deterministic latency, real-time, mission-critical or networked AR/VR on 5G networks (end-to-end) i.e. including F1-U/N3/N9.
 - However, with current approach, it is difficult to provide SLA guarantees for the above, in various 5G procedures (including mobility).
 - This is mostly because 5G architecture focused only on Radio Access Network and Core Network and midhaul/backhaul transport network is not seen in an integrated fashion. (Framework to address the above)
- 2. An under specified mapping function from 3GPP PDU session to transport network paths. Where multiple technologies are possible in backhaul network to create the transport path. (Addressing the same & applicability to the framework)





- 1. This draft was first presented in July 2018, @IETF102, Montreal ('01' version)
 - Mobility functions aware of underlying transport
 - Mapping to various underlying transport technologies (underlays)
- 2. An updated version is presented Nov 2018 @IETF103 Bangkok ('02' version)
 - How QoS being carried in N3, N9 interfaces
 - Missing transport network related items w.r.t to Slice selection in integrated approach (Section 2.2)
 - Sec 3, , 3..1 & 5 updates received in the list/offline
- 3. An updated version is presented July 2019 @ IETF105, Montreal ('04' version)
 - Incorporated extensive feedback received from couple of folks
- Added contributions from Altiostar, Nokia, FW Wireless, InterDigital (as contributor) and added as Co-authors
 - 2 approaches presented for the framework and multiple options for carrying MTNC-ID

Recap (Contd..)



4. An updated version is presented Nov 2019 @ IETF106 , Singapore ('05' version)

- Simplified Solution Approach (Chapter 2)
- Carrying Transport Context Identifier
- Further addressed comments received

5. This work further tuned in version 06, with contributions from co-editor, John K. and updated in the list

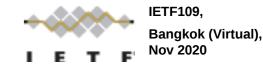
Recent Comments Summary



Received further comments from the WG last month.

- Related to simplifying Section 3 and Appendix
- Additional ranges for SD-WAN applicability beyond mobility domain
- Couple of comments (inconsistent descriptions, missed items, nits) received in the list

Changes in Current Version/Revision 08



1. Simplified Section

- Last Revision had detailed descriptions
- New version has been simplified :

3. 1	ransport Network Unde	rlays .									15
3.1	. Applicability						 •				15
3.2	. Transport Network	Technolo	ogies	6	•						17

2. Appendix-B related to various SSC modes has been moved out

- To a new draft <u>https://tools.ietf.org/html/draft-chunduri-dmm-5g-mobility-with-ppr-00</u>
- That also covers how Section 3.1/Applicability can be achieved through PPR
- Referenced this draft in relevant places (but, yet to list in the refences – as both drafts updated on the same day on IETF109 deadline)

3. Addressed the additional ranges for mobility domain & beyond in Sec

4. Other updates to address the comments.



- From authors side we were ready in 06 version itself (but as there were no IETF virtual sessions we couldn't follow-up)
- Current version (08) as explained addresses further comments received

At this point we ask for WG adoption to further continue this work!