

Computing Aware Traffic Steering Consideration for Mobile User Plane Architecture

draft-dcn-dmm-cats-mup-00

Minh-Ngoc Tran (Soongsil University), Younghan Kim (Soongsil University)

Problem Statement

- Draft **draft-mhkk-dmm-mup-architecture** proposes a Mobile User Plane architecture for DMM in which a MUP controller converts mobility session information into Dataplane routing information

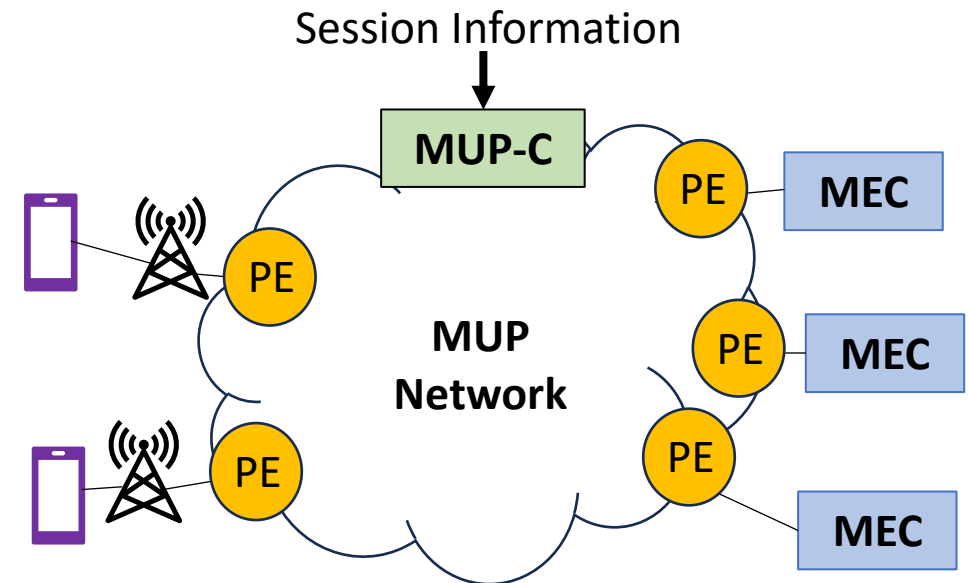
- Consider **anycast address** is used for services (Multiple instances of a same service is represented By a single IP address)

→ Upper mobility management system's session information might **Not be optimal in term of service instance's location**

(e.g closest geographical instance might not be the optimal one, it might currently serve too much users)

→ Enhance **anycast address support** for this MUP DMM architecture? (could be in scope of DMM multicast support requirement)

→ MUP-C capability to convert session info to routing information toward optimal service instance?



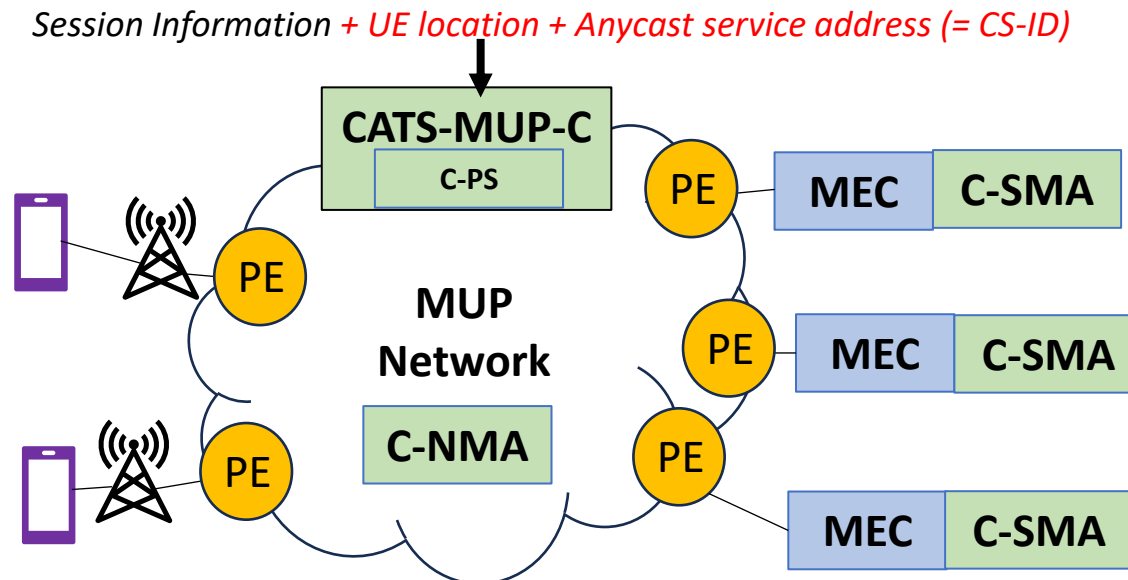
Proposed Architecture

Integrate Computing-Aware Traffic Steering (CATS) concept in [1] into MUP-C

[1] draft-ldbc-cats-framework "A Framework for Computing-Aware Traffic Steering (CATS)" in CATS WG

- Service Computing and Underlay Network metrics are collected and distributed to CATS-MUP-C
- For each user session, CATS-MUP-C's C-PS bases on current information and selects the optimal service instance's location
- Then, CATS-MUP-C convert session information to corresponding routing information toward the chosen service instance's location

**Metrics distribution method, optimal selection algorithm is in CATS scope, not this proposal*



- CS-ID: CATS Service ID
- C-PS: CATS Path Selector
- C-NMA: CATS Network Metric Agent
- C-SMA: CATS Service Metric Agent

Summary

- A solution to add anycast support to previously proposed MUP architecture
 - By integrating CATS capabilities into MUP-C
 - Future draft versions might discuss possible changes to procedure and routing types.
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- We welcome any comments and suggestions. Thank you!