

SUPERFLUIDITY



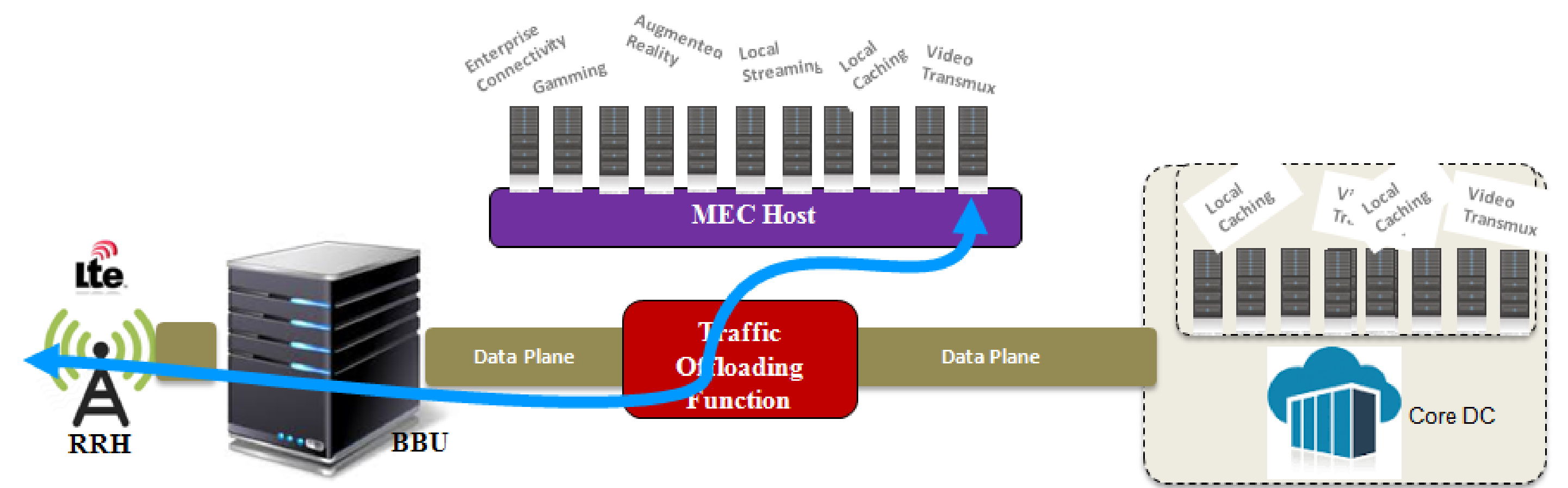
Video transmuxing at the edge, using MEC

CHALLENGES

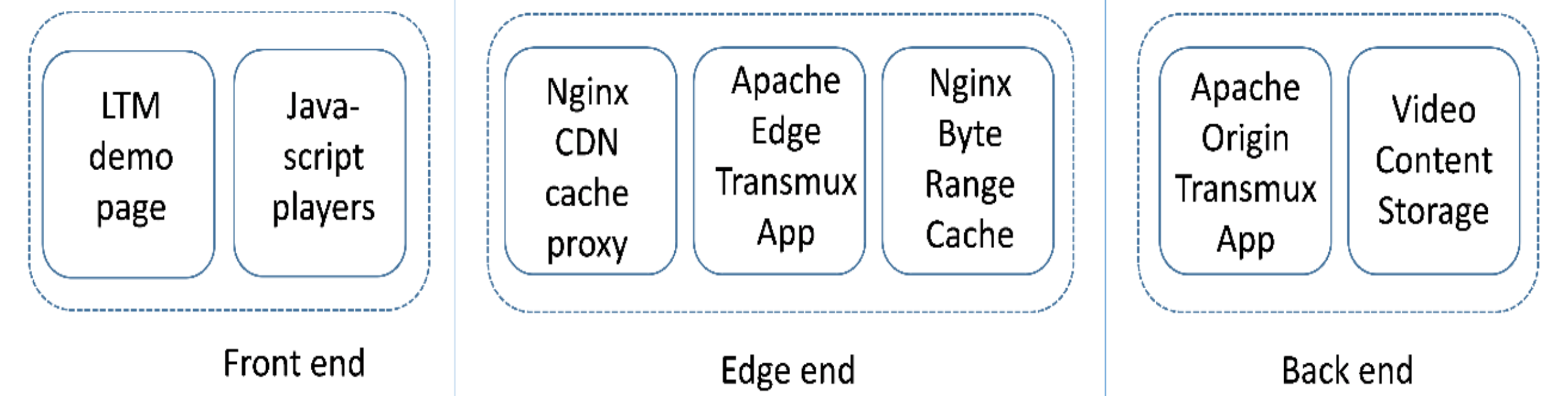
- Assure the delivery of high demanding services with low latencies and bandwidth savings, by providing cloud capabilities at the edge
- Optimize video delivery, by reducing caching of different video formats
- Adopt SDN and NFV related technologies in the overall implementation

INNOVATIONS

- Early "in progress" ETSI MEC standardization implementation (partial)
- Isolation of multi-tenant ME Apps (networking and compute)
- Smart Transmux Edge Cache implementation with byte range caching
- Have a MEC implementation ready for addressing MEC evolutions (Mobility and MANO)

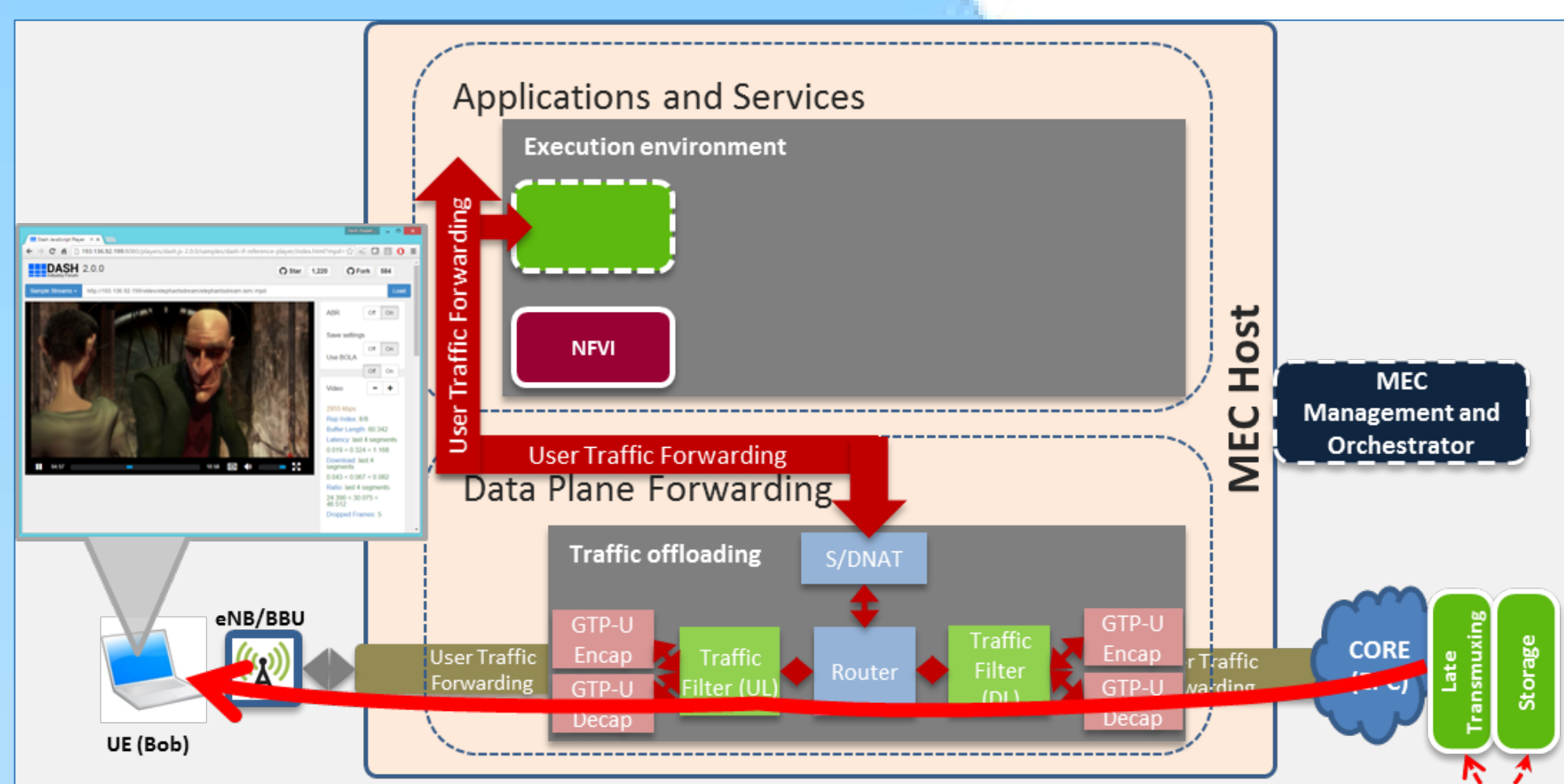


MEC deployment in Superfluidity environment

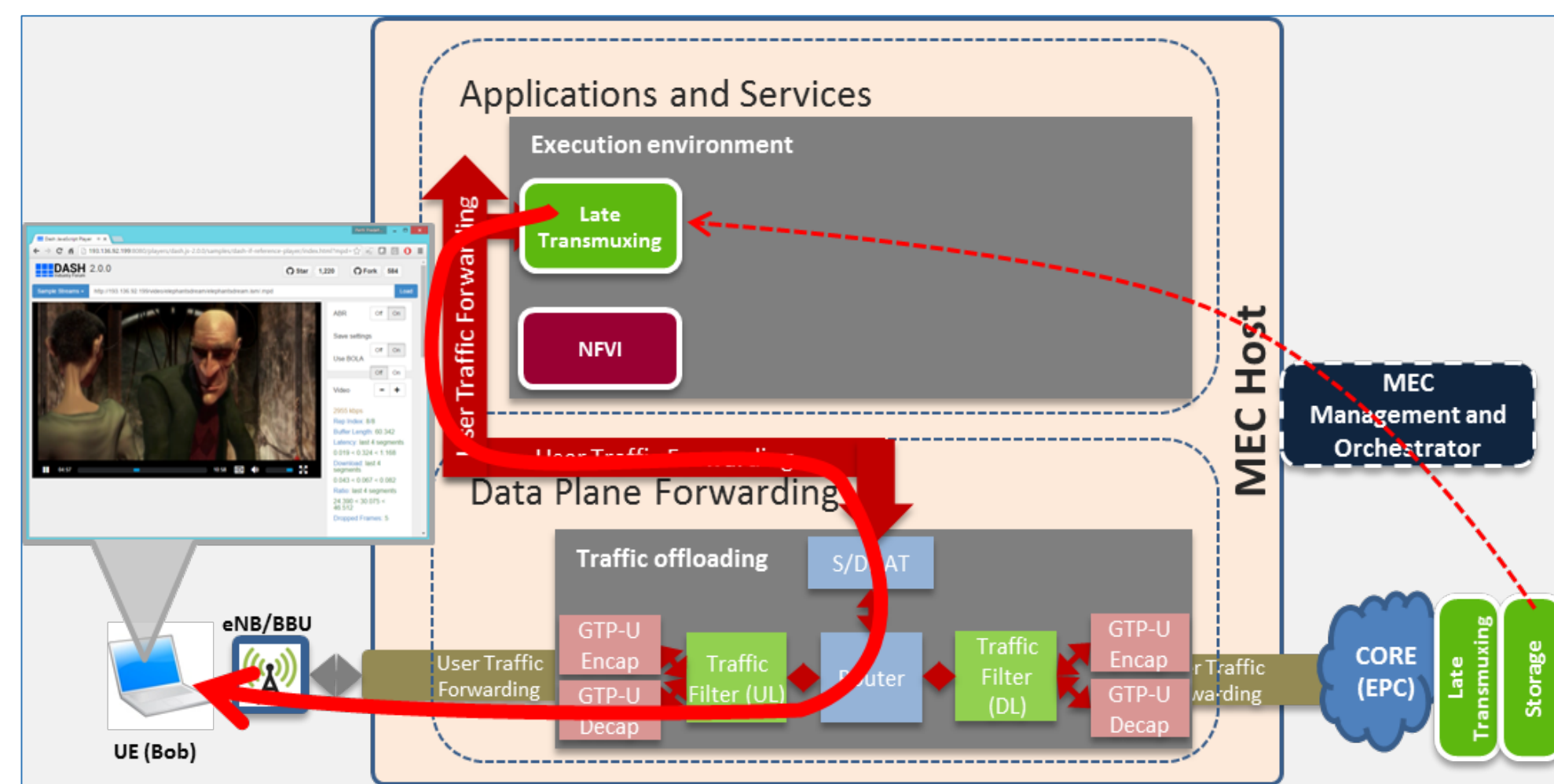


LTM setup developed in the Superfluidity project

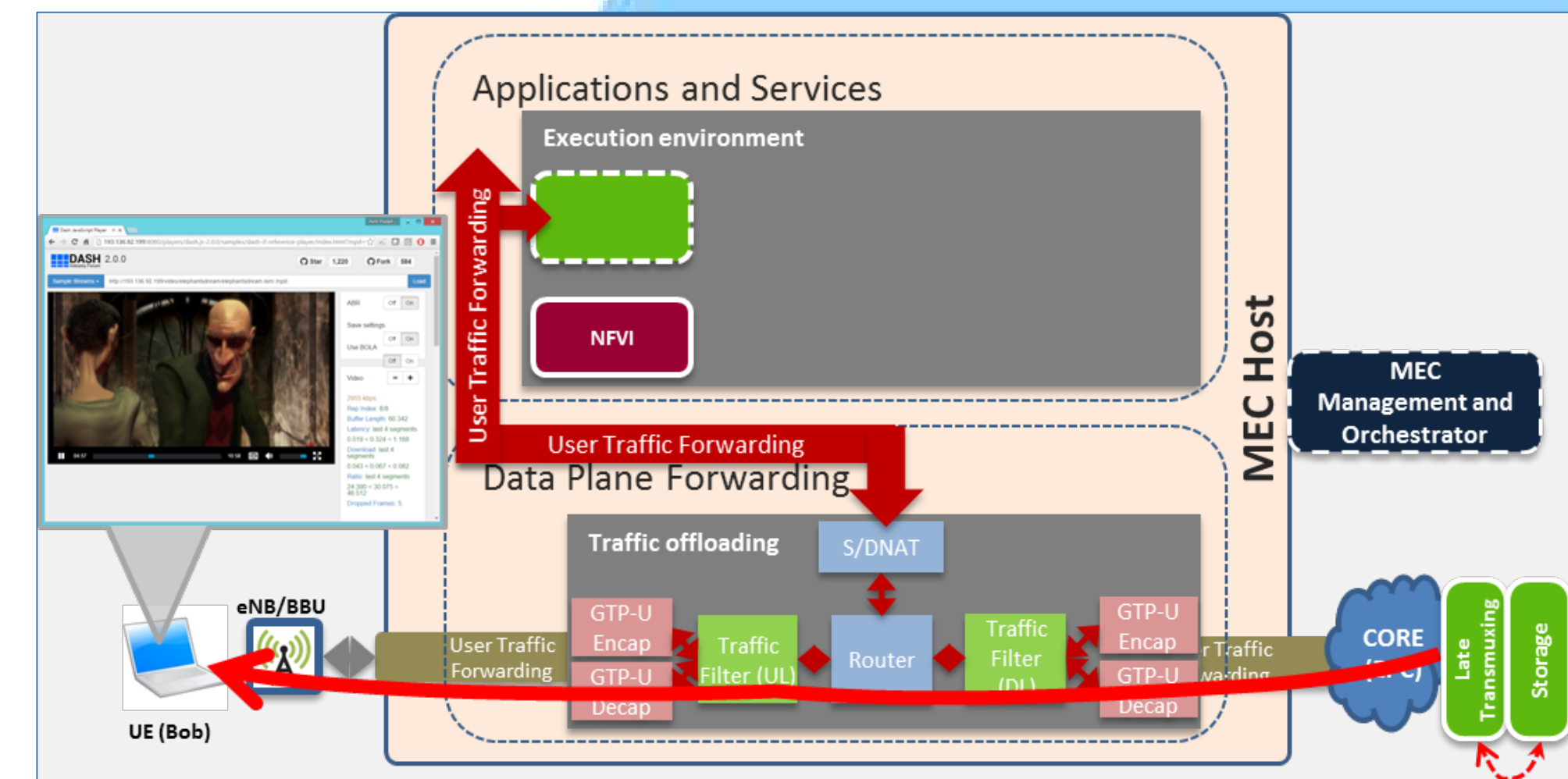
DEMO STEPS



Video streaming from the core

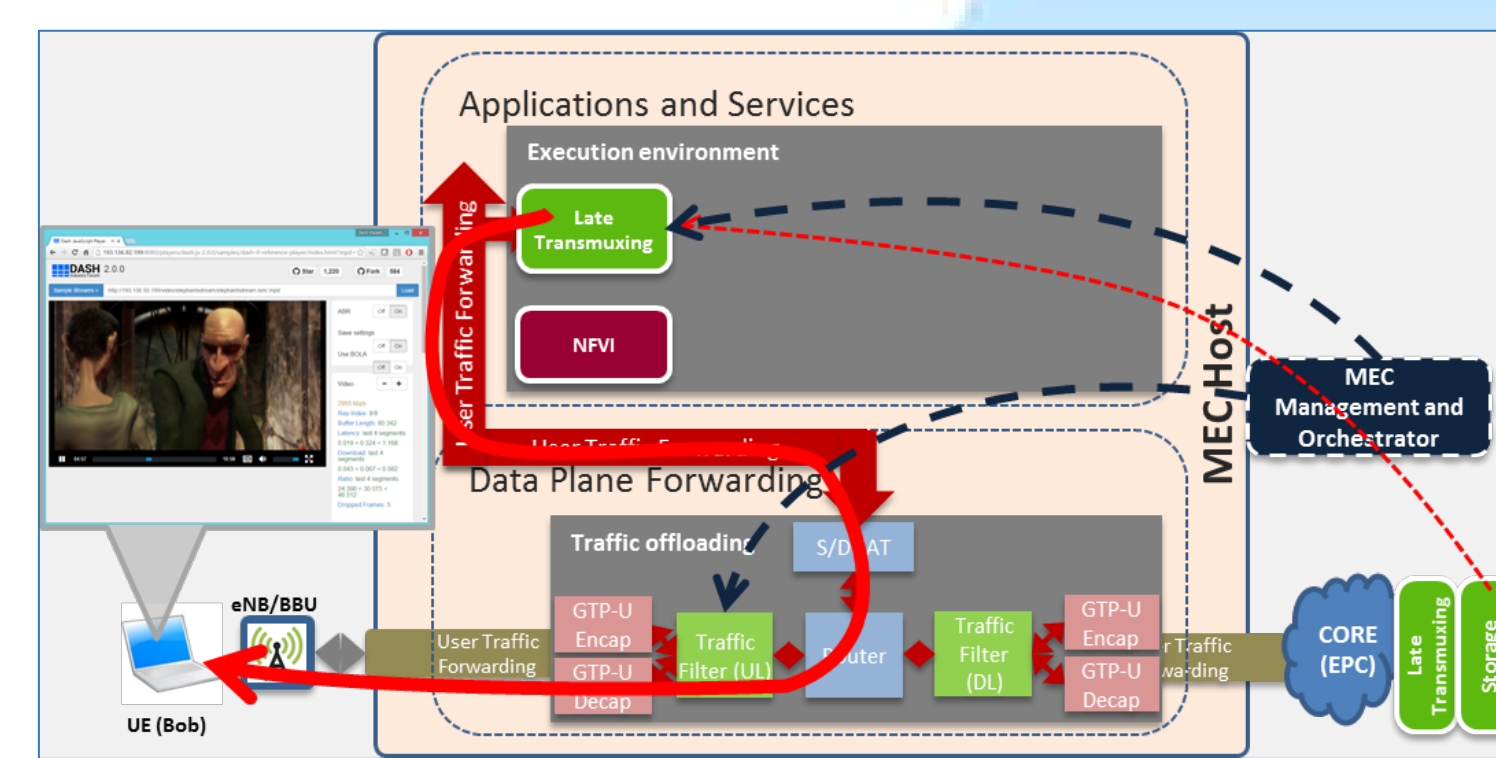
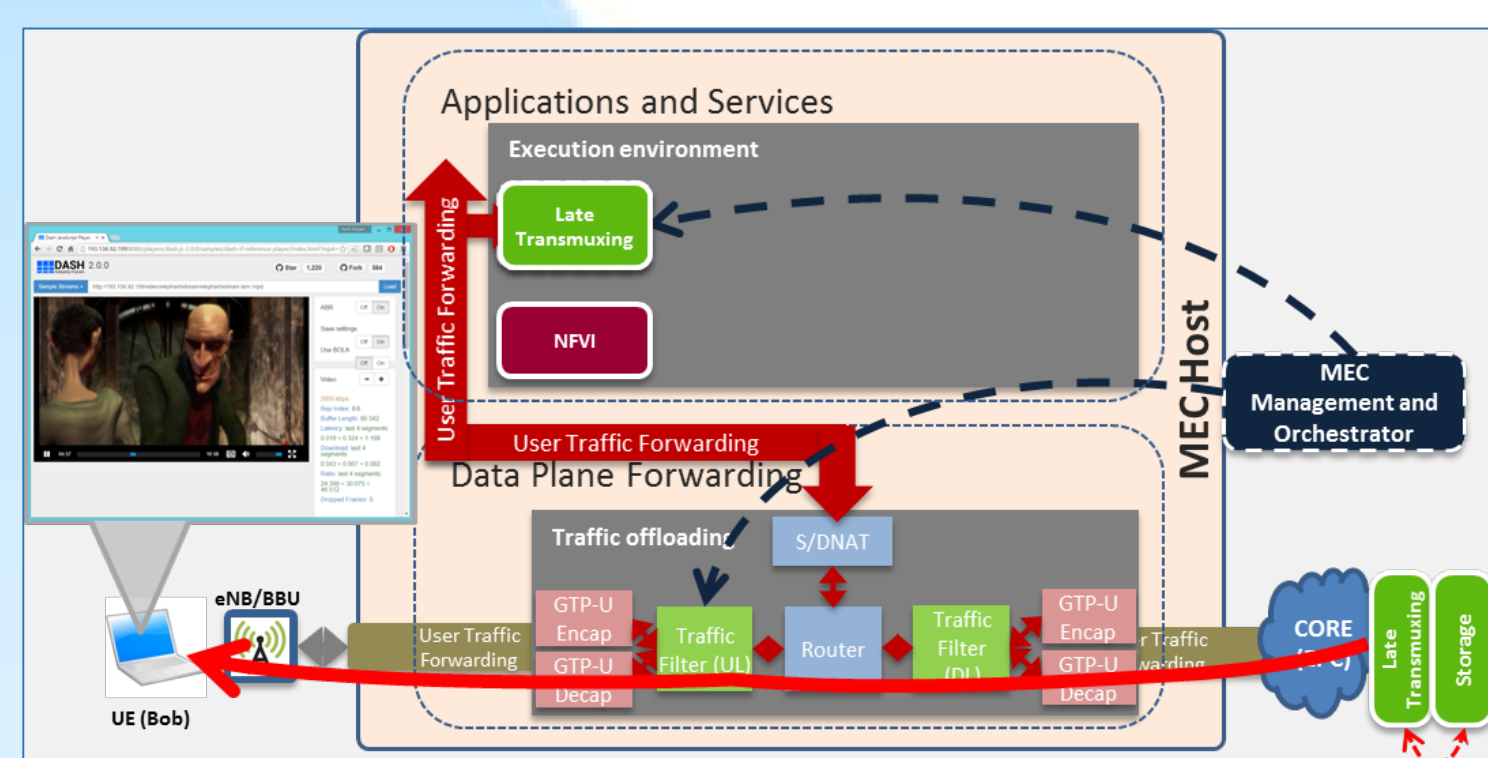


Video streaming from the core
Late Transmuxing at the edge
Caching at the edge



Video streaming moved back to the core

Application deployment at the edge
Traffic rules change for traffic offloading to the application



Traffic rules change
Application disposal

BENEFIT - CONTRIBUTIONS

- Computational/storage capacity distributed towards the edge
- Bandwidth efficiency, with services being provided from the edge
- Latency reduction, which is key to increase the quality of experience of many services
- More efficient caching and reduced core network bandwidth
- Support any video format/device without incurring extra network/storage costs

PUBLISHED PAPER

Rufael Mekuria, Jelte Fennema, Dirk Griffioen.
Multi-Protocol Video Delivery with Late Trans-Muxing.
In *Proceedings of the 2016 ACM on Multimedia Conference (MM '16)*. ACM, New York, NY, USA, 92-96. DOI: <http://dx.doi.org/10.1145/2964284.2967189>

