

Rel-18 Upper Layers Misc. Features: AS Security Enh, NPN Enh, Inter UE coordination

3GPP TSG RAN Rel-18 workshop

June 28-July 2, 2021

Agenda Item: 4.3

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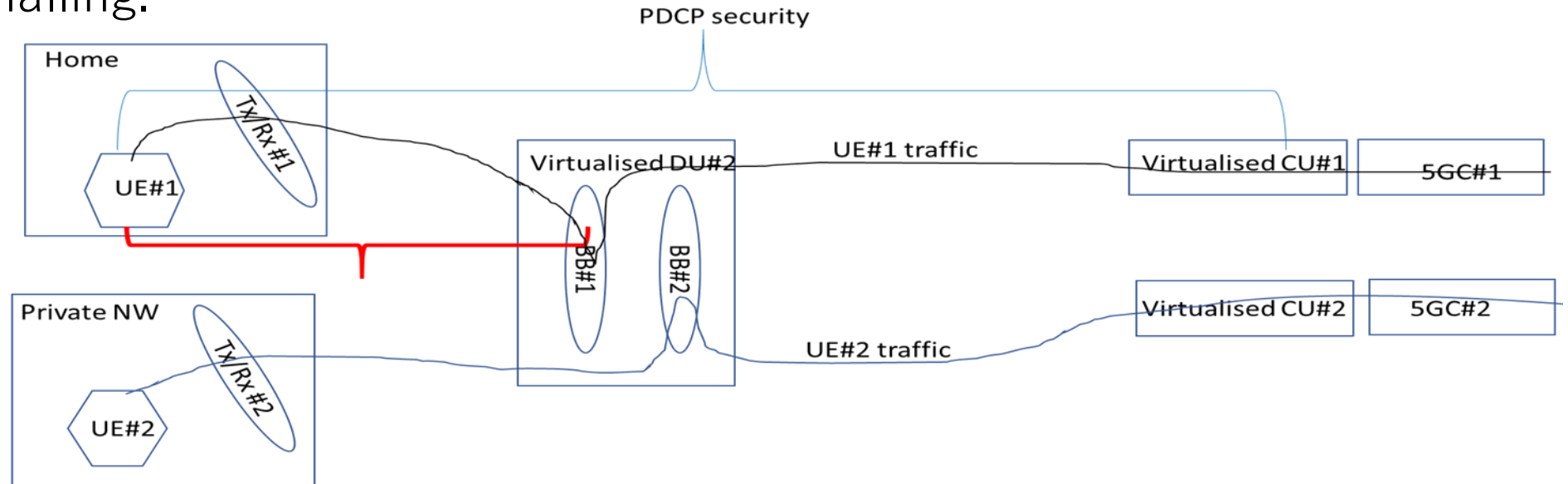
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New topic: AS security enhancements

- Current AS security protects (Ciphering and integrity protection) L3 signalling.
- Rel-17 SA3 study “Study on 5G security enhancements against False Base Stations (FBS)” on protecting system information. Other unprotected parts MAC-CE were discussed but no feasible solution was found.
- In addition, RAN/RAN2 received an LS on “User location identification from Carrier Aggregation secondary cell activation messages” from GSMA highlighting the vulnerability of unprotected lower layer signalling.

New topic: AS security enhancements

- Due to virtualisation of base station, different functions may be hosted by different stakeholders. One example shown below
- It is important to have a trust relationship between UE and network even for L2/L1 signalling.



- **Proposal:**
 - **RAN and SA should coordinate and start the normative work in RAN on protection of lower layer signalling**

New Topic: NPN enhancements

- Rel-17 NPN enhancements introduced RAN impacts due to UE on-boarding and credentials held by third party.
- Continuing the same theme, Rel-18 should allow on-demand 5G network deployment and on-demand services from third party. For example, a mobile operator may provide special contents only to those inside a stadium and/or within a certain period of time, and to subscribers agreed to use this service.
- Providing these contents or on-demand service may require specific and dynamic QoS support, network/UE configuration and policies/provisioning.
- **Proposal:**
 - **Mechanism for UE to discover/trigger on-demand third party services**
 - **Mechanism for UE to explore charging and other aspects**

New Topic: Inter UE coordination over Uu and SL

- For high throughput and user experience, Inter UE coordination over Uu and SL should be explored.
- **Proposal:**
 - **L2 architecture, functionalities and interfaces for data splitting and aggregation in sidelink considering coordination with Uu link**

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