

Discussion on PS_DATA_OFF way forward

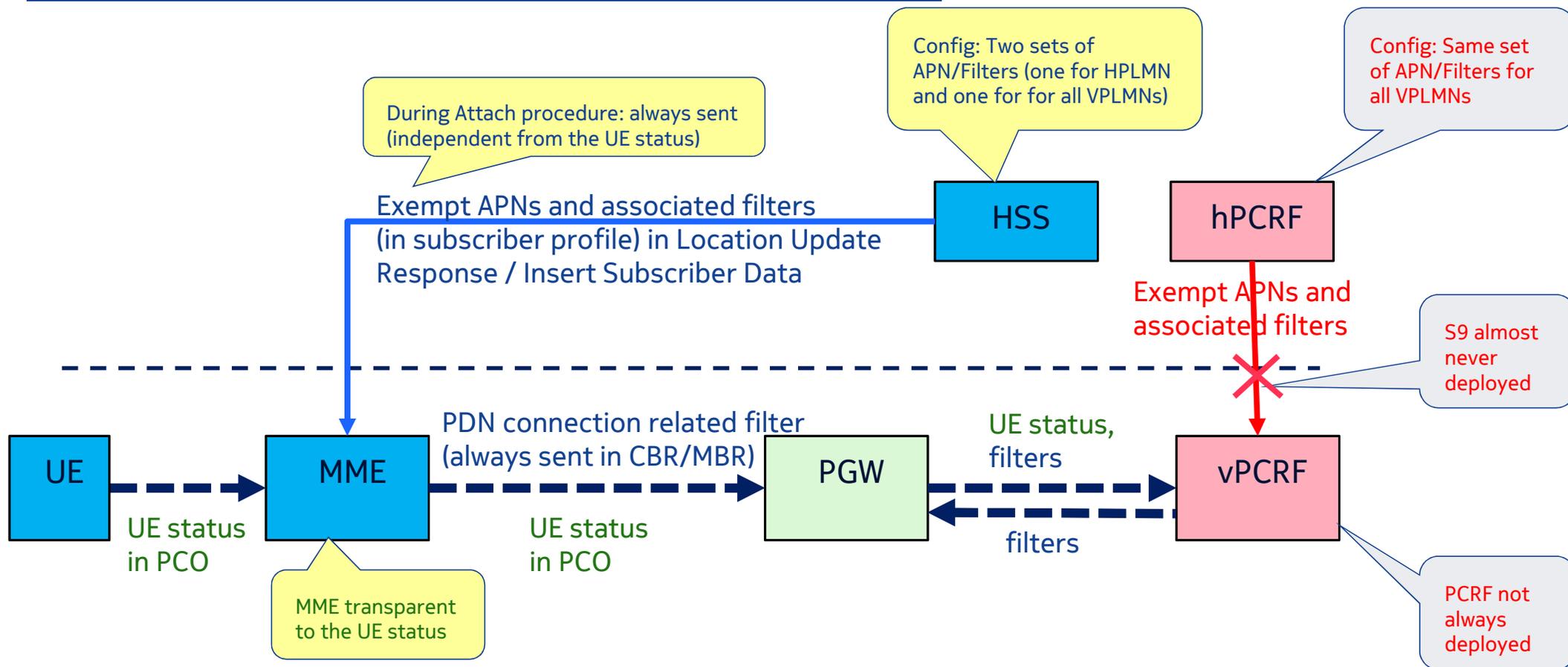
SA1 just sent an LS (S1-172233) to SA2 on "Sets of 3GPP PS Data Off Exempt Services" with two aspects:

1. LS states "Now SA1 has reviewed the service requirements, and agreed a CR to Rel-14 (and Rel-15 mirror) that removes PLMN-specific sets of 3GPP PS Data Off Exempt services."
- ➔ There is no need anymore to send a per PLMN List of Data Off Exempted Services (DOES) to the UE. The Rel-14 solution, based on Device management can be used to provide the UE with
- One list of DOES for the HPLMN
 - One list of DOES for all the other PLMNs

2. LS states "SA1 also considered the timing of updates to the sets. TS 22.011 says it is important to disable IP Packets in both uplink and downlink to have charging consistency between HPLMN and VPLMN, and to avoid bill shock. **A mechanism shall be specified to allow dynamic real-time updates to the sets**, but SA1 acknowledges that it may not always be possible, and added a note to TS 22.011 to say that the updates might not take effect in real time."
- ➔ A real time mechanism is required to update the list of APN and associated filters in the PGW.
 - ➔ This is required in particular for LBO roaming case, since for non-roaming and home-routed roaming scenarios, the Rel-14 solution can work.
 - ➔ This mechanism needs to be specified but remain optional : local configuration shall also be possible in the VPLMN.

HSS based solution vs PCRF based solution

S2-173552



- The WID precisely describes the HSS based solution as to be specified
- SA1 asks SA2 to specify a solution "allows dynamic real-time updates to the sets " (e.g. can be because home PLMN server addresses are changed, etc)
- It was already decided during the study to specify HSS based solution because PCRF-based solution
 - does not allow a PLMN that did not deployed PCRF to get updates from the HPLMN in a dynamic real-time manner
 - does not allow a VPLMN to get updates from the HPLMN in dynamic real-time manner even if PCRF is deployed in a VPLMN, since S9 interface is almost never deployed
- HSS based solution
 - has minimal impacts to the HSS: only a small configuration is required, no additional message over S6a, no changes on the HSS state machine, only additional parameters
 - has limited changes on MME: no additional message/step over S11/S5/S8, no changes on the MME state machine, only additional parameters in existing messages (CBR/MBR)
 - does not impact the UE
- Conclusion: HSS based solution described in the HSS shall be specified