

# 3GPP Rel-19 FS\_MPS4msg

## Outstanding issues

**S2-2406199**

Peraton Labs - Rapporteur

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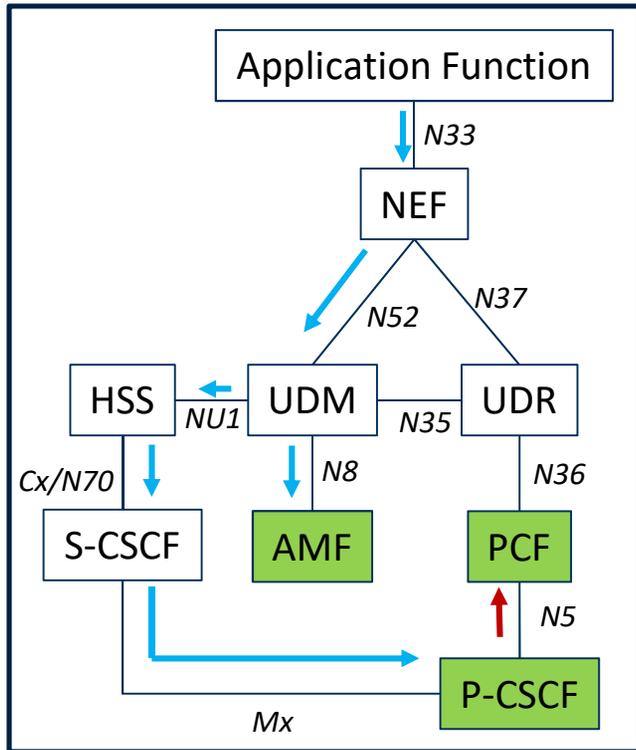
# Intro and Purpose

- There are three remaining Editor's Notes in 23.700-75
- Two of these Notes are discussed in these slides
  - Pros/cons for different 5G architecture solutions
  - Includes 4G
  - Call flows for Activation/Deactivation
- Not included:
  - Editor's Note on IP-SM-GW

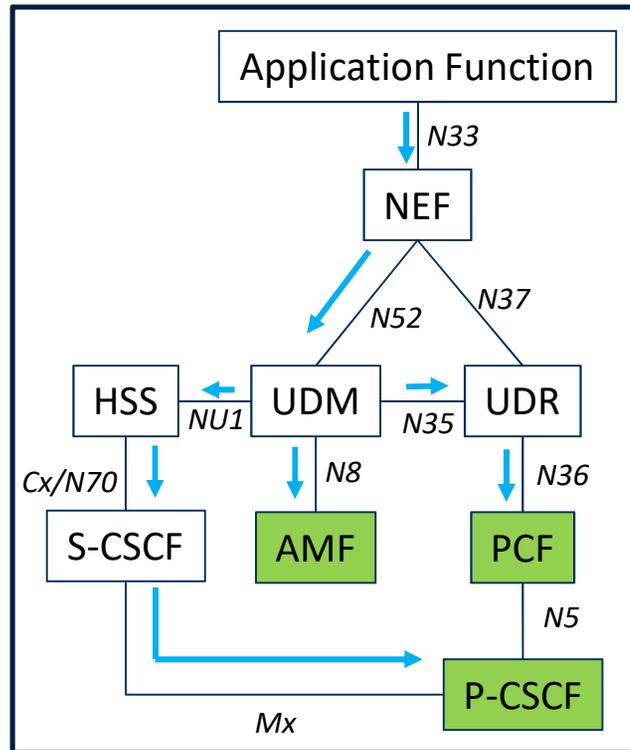
5G

# Main Approaches - 5G

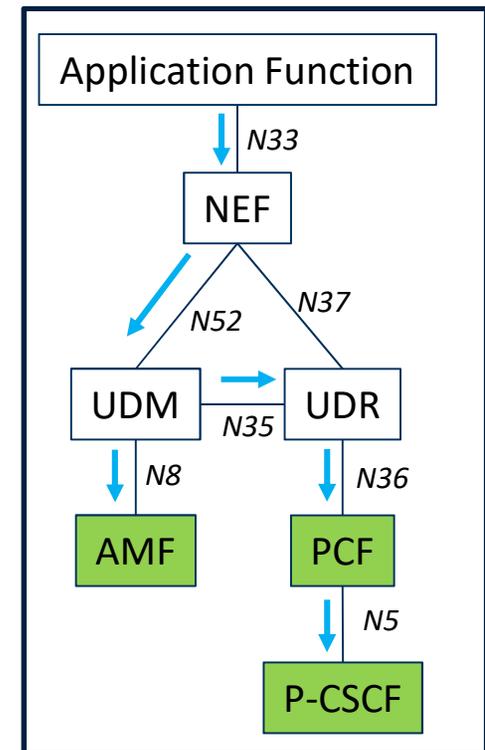
**HSS-method A**



**HSS-method B**



**UDR-method**

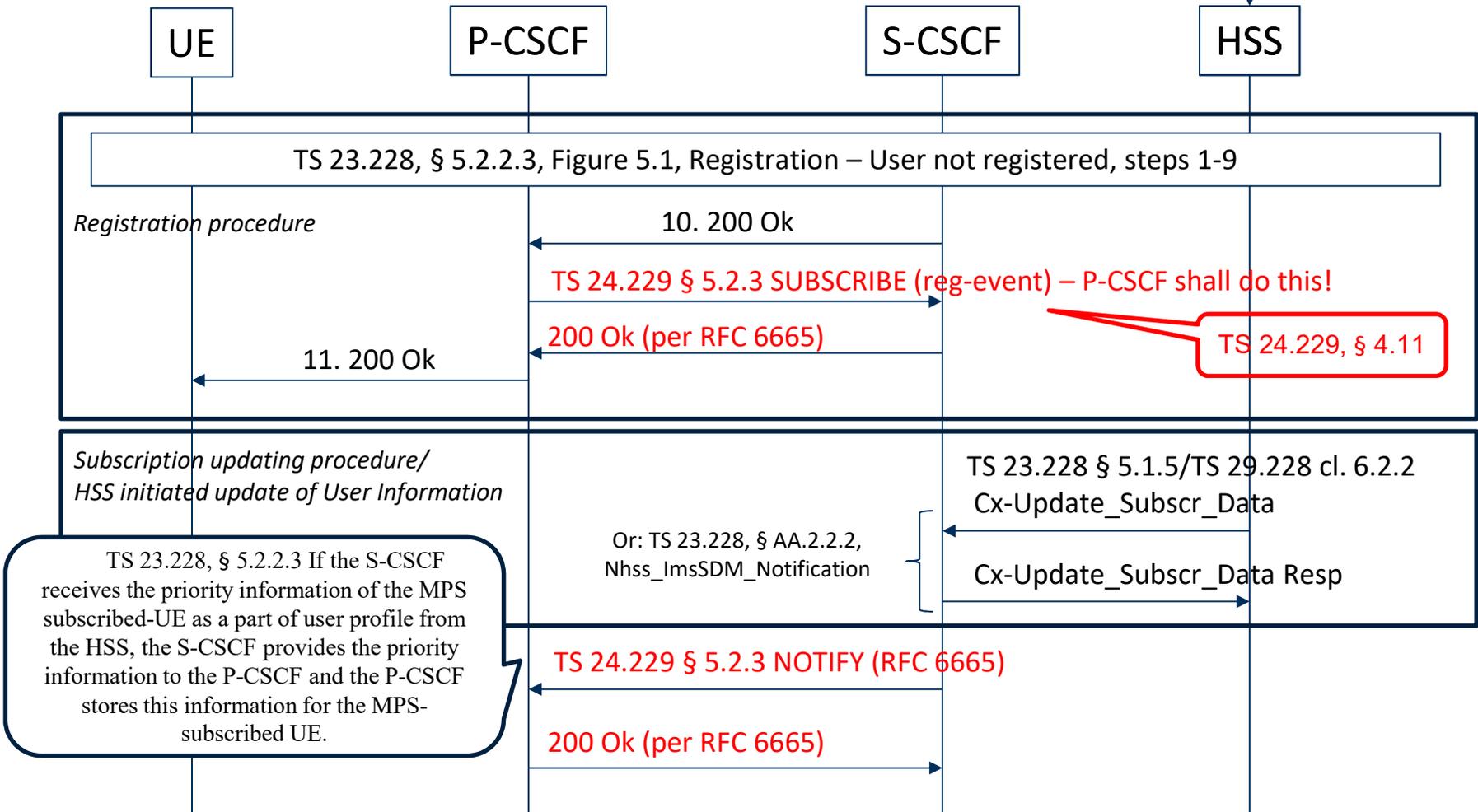


- MPS for messaging indicator path
- Request for IMS signalling priority
- FE needing MPS for messaging indicator

# HSS Method 1A+1B (abbreviated)

## P-CSCF gets MPS indicator updates from S-CSCF

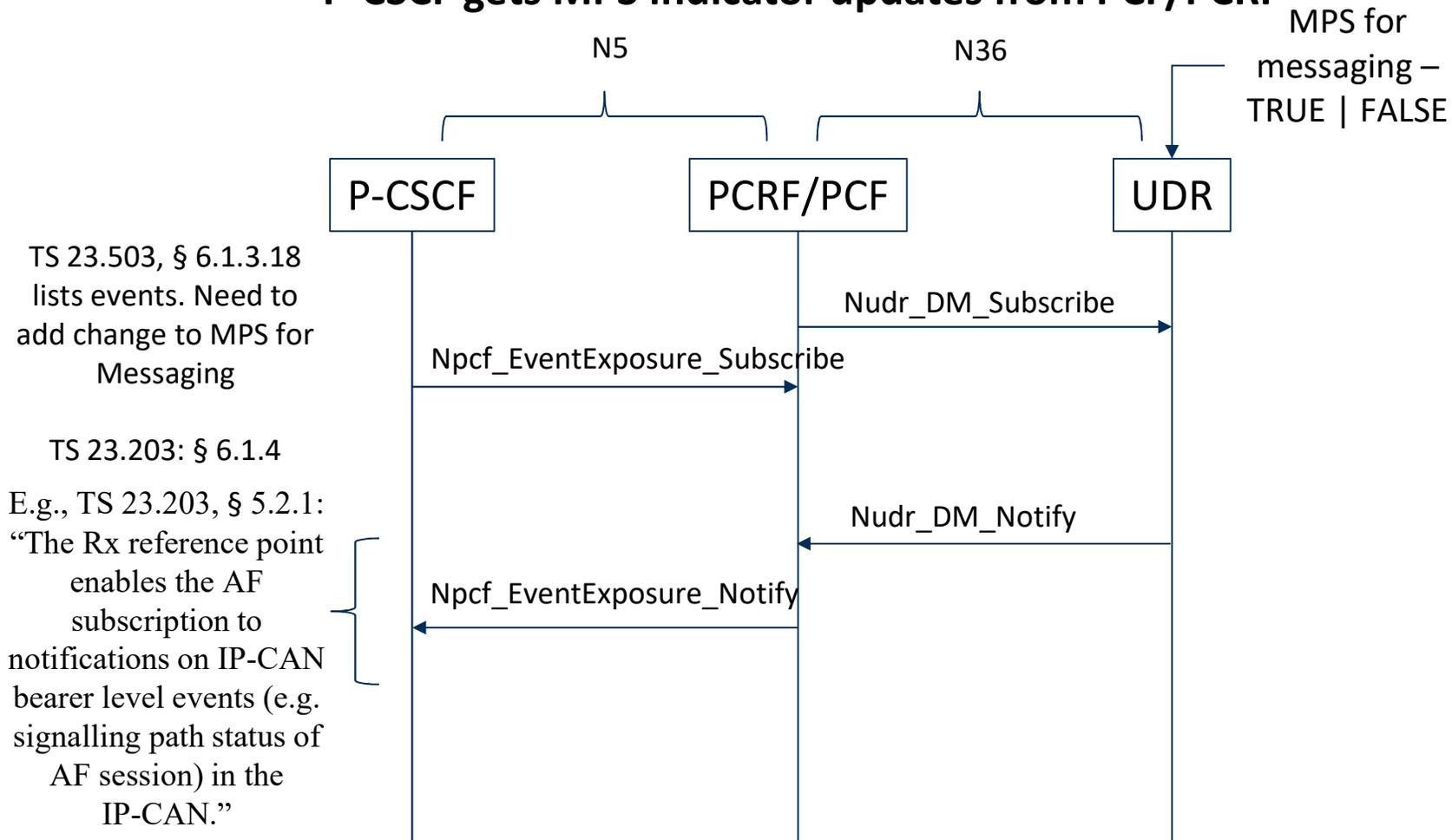
MPS for messaging – TRUE | FALSE



Red is not new; it exists today. Everything is in place today for MPS for Messaging. Need to add MPS for messaging attribute. May want to add other clarifications in stage 2 and 3.

# UDR Method (abbreviated)

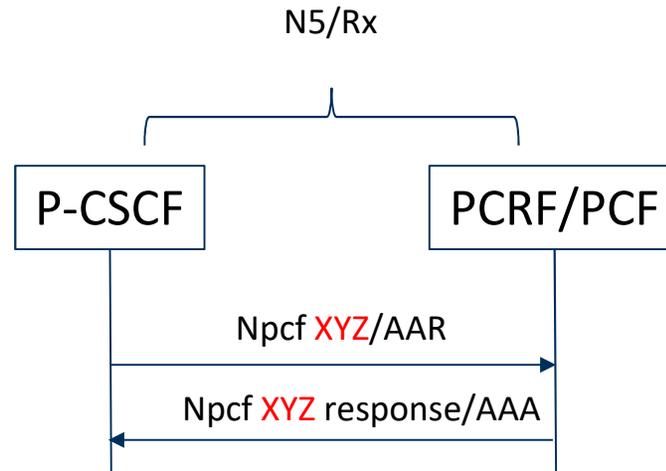
## P-CSCF gets MPS indicator updates from PCF/PCRF



Unusual to send an update in a “subscription” over N5, but it could be done. Is there an architectural principle against this? A new entry will be required in the table in § 6.1.3.18. P-CSCF will need to ‘subscribe’ with the PCF. Main question is “What triggers this subscription attempt from the P-CSCF?” Will it be for all UEs, or for all UEs of operators who implement MPS? Is there something better?

# HSS Method 1A (abbreviated)

## P-CSCF requests QoS upgrade for IMS signalling



Today, 3GPP already allows a P-CSCF to interact with the PCF without the presence of an existing SIP session, e.g.:

- TS 29.214, clause 4.4.11 MPS for DTS Control (Rel-17)
- TS 29.514, clause 4.2.2.12.2 MPS for DTS (Rel-17)

For HSS method 1A, the P-CSCF would request from the PCF the modification of the priority of the IMS signaling QoS Flow.

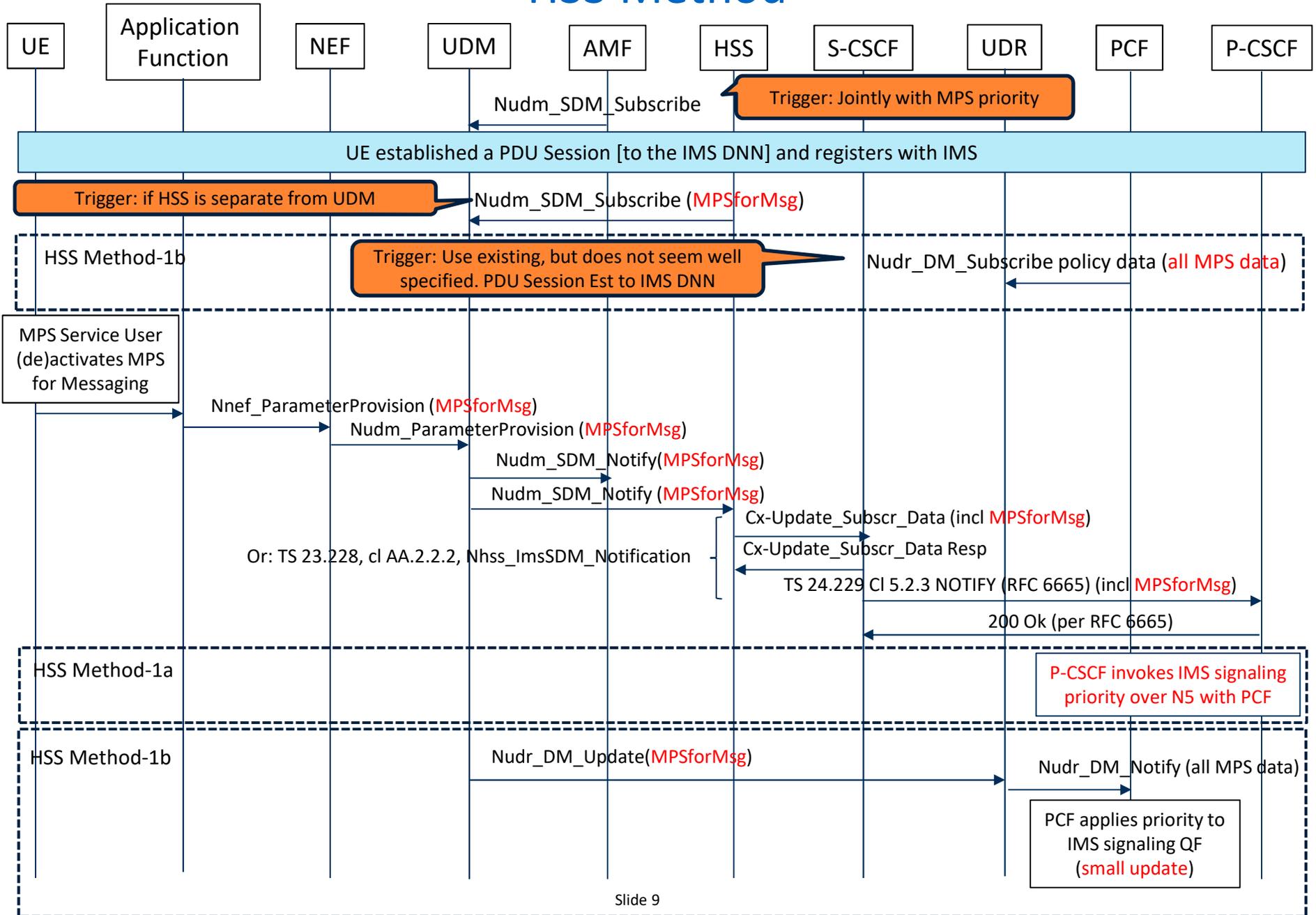
It is a small change to add the modification of the priority of the IMS signaling QoS Flow. We would need to add the following:

- TS 29.214, new clause 4.4.x, Modify priority of the IMS Signalling Flow, and
- TS 29.514, a new clause 4.2.2.x, Modify priority of the IMS Signalling Flow

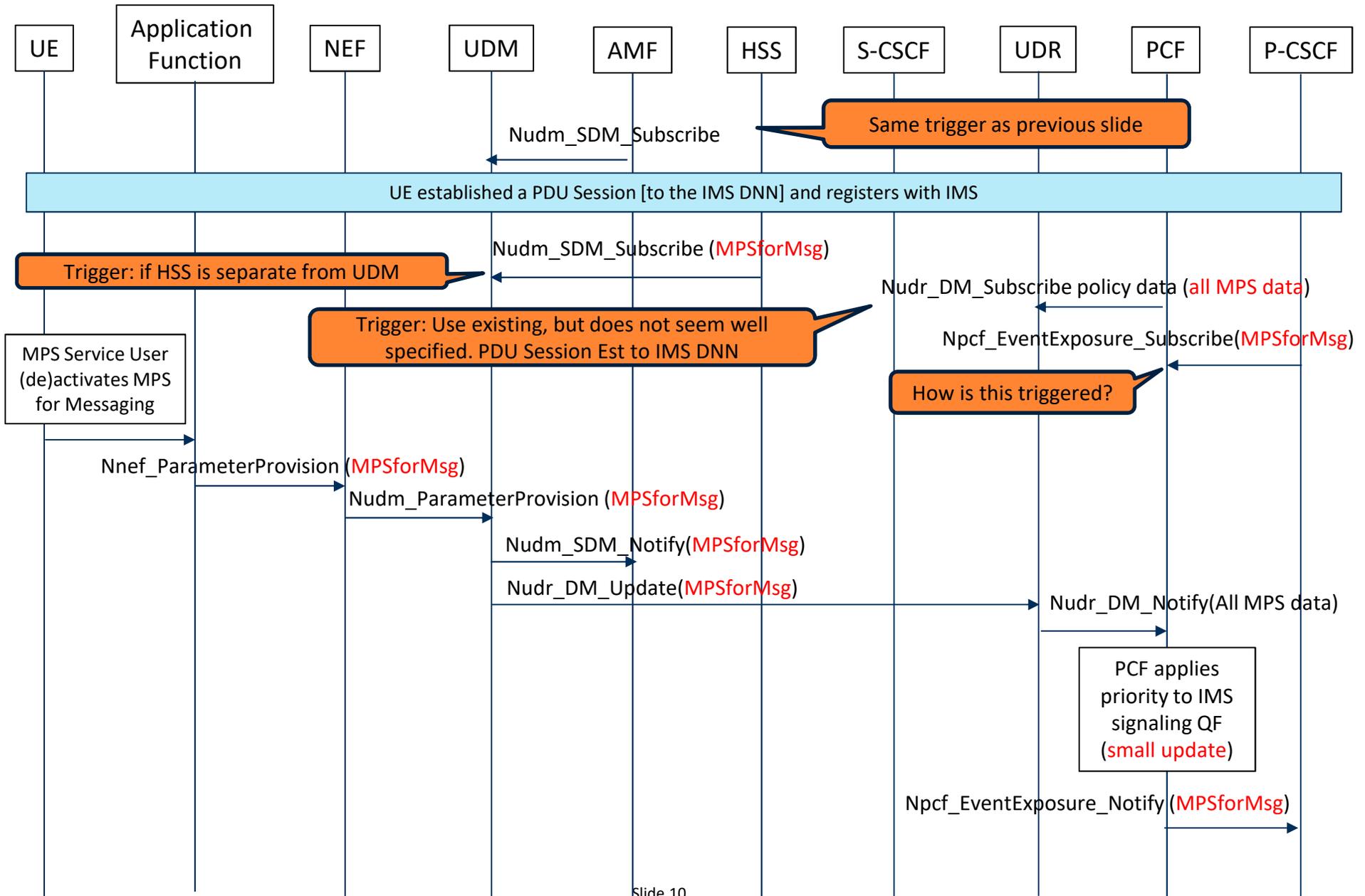
# UDR – MPS for messaging attribute

- Today, UDR has the following in **SmPolicyDnn Data**:
  - MPS priority
  - IMS signaling priority
  - MPS priority level
- In HSS Method 1B and UDR Method, UDR needs a new parameter, i.e.,
  - MPS for messaging
- The operator can modify ‘IMS signaling priority’, but the MPS Service User can modify ‘MPS for messaging’.
- PCF applies priority to IMS signaling based on either attribute.
  - IMS signaling priority is FALSE, but MPS for messaging is TRUE -> apply priority to IMS signaling.

# HSS Method



# UDR Method

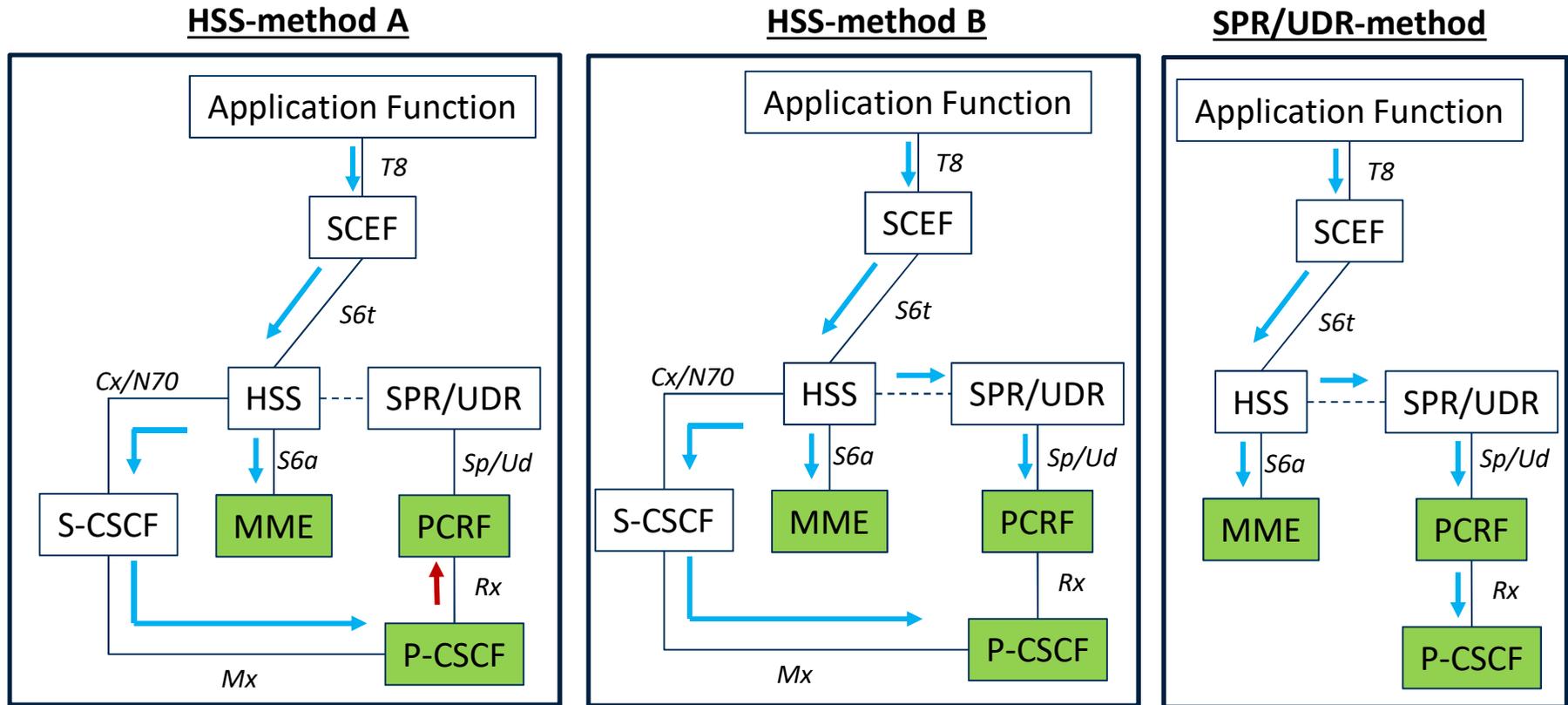


## Comparison of Main Approaches (5G view)

Options	N5 scope	Description	Observations
HSS-1A	P-CSCF asks PCF for priority for IMS signaling flow	Similar to what was done for DTS, but in this case it will be for IMS DNN and not for default QoS Flow, but for IMS signaling QoS Flow.	<ul style="list-style-type: none"> <li>• P-CSCF uses existing regEvent mechanism for MPS subscription info.</li> <li>• Similar to existing On-Demand MPS models. May not require additional MPS for messaging attribute in UDR</li> <li>• Requires a new procedure for P-CSCF to request modification of the priority of the IMS signaling bearer/QoS Flow.</li> </ul>
HSS-1B	No N5 interaction	PCF manages the IMS signalling priority directly taking into account the existing IMS signalling priority UDR attribute and the new MPS for Messaging attribute.	<ul style="list-style-type: none"> <li>• Requires additional MPS for messaging attribute in UDR and some enhancement to PCF logic.</li> </ul>
UDR	PCF informs P-CSCF of MPS for Messaging status	P-CSCF needs to subscribe to a new event with PCF.	<ul style="list-style-type: none"> <li>• Requires additional MPS for attribute in UDR</li> <li>• New event between AF (P-CSCF) and PCF.</li> <li>• PCF today reports on traffic/PDU session related events. Now needs to report on a subscription to AF</li> <li>• P-CSCF to ignore MPS for messaging info in existing regEvent mechanism for MPS subscription info.</li> <li>• Might require all UEs (not only MPS UEs) subscribe with the PCF for this information.</li> </ul>

4G

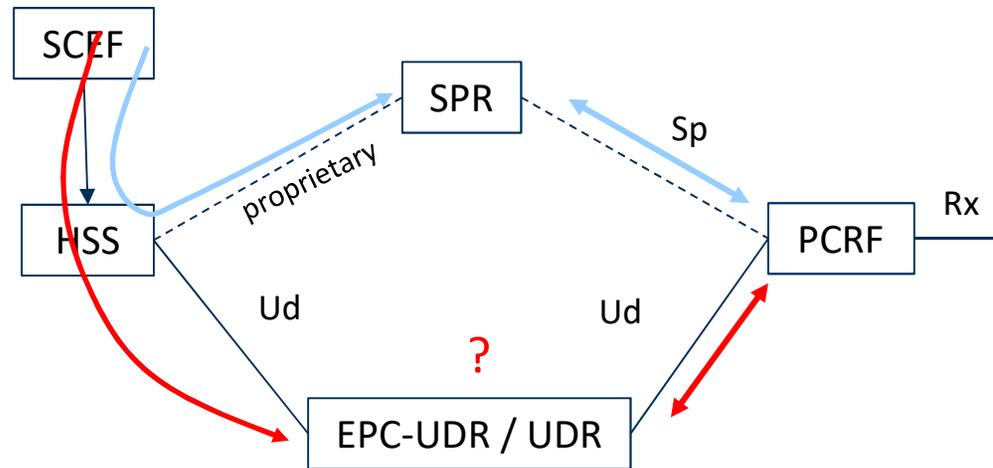
# Main Approaches (4G)



- MPS for messaging indicator path
- Request for IMS signalling priority
- FE needing MPS for messaging indicator

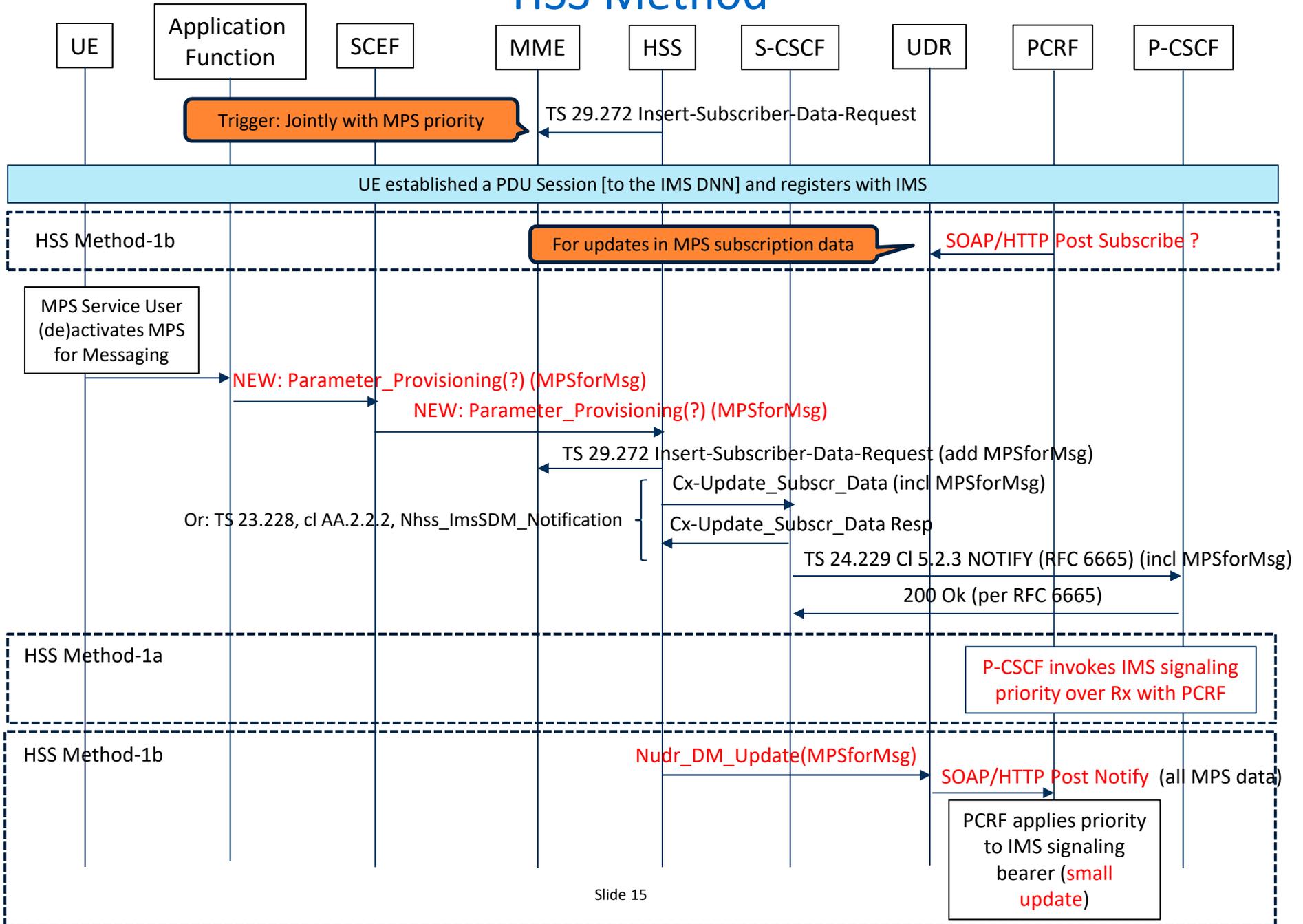
# HSS -> SPR/UDR -> PCRF

Replicating 5G, i.e., SCEF -> HSS -> SPR/UDR -> PCRF



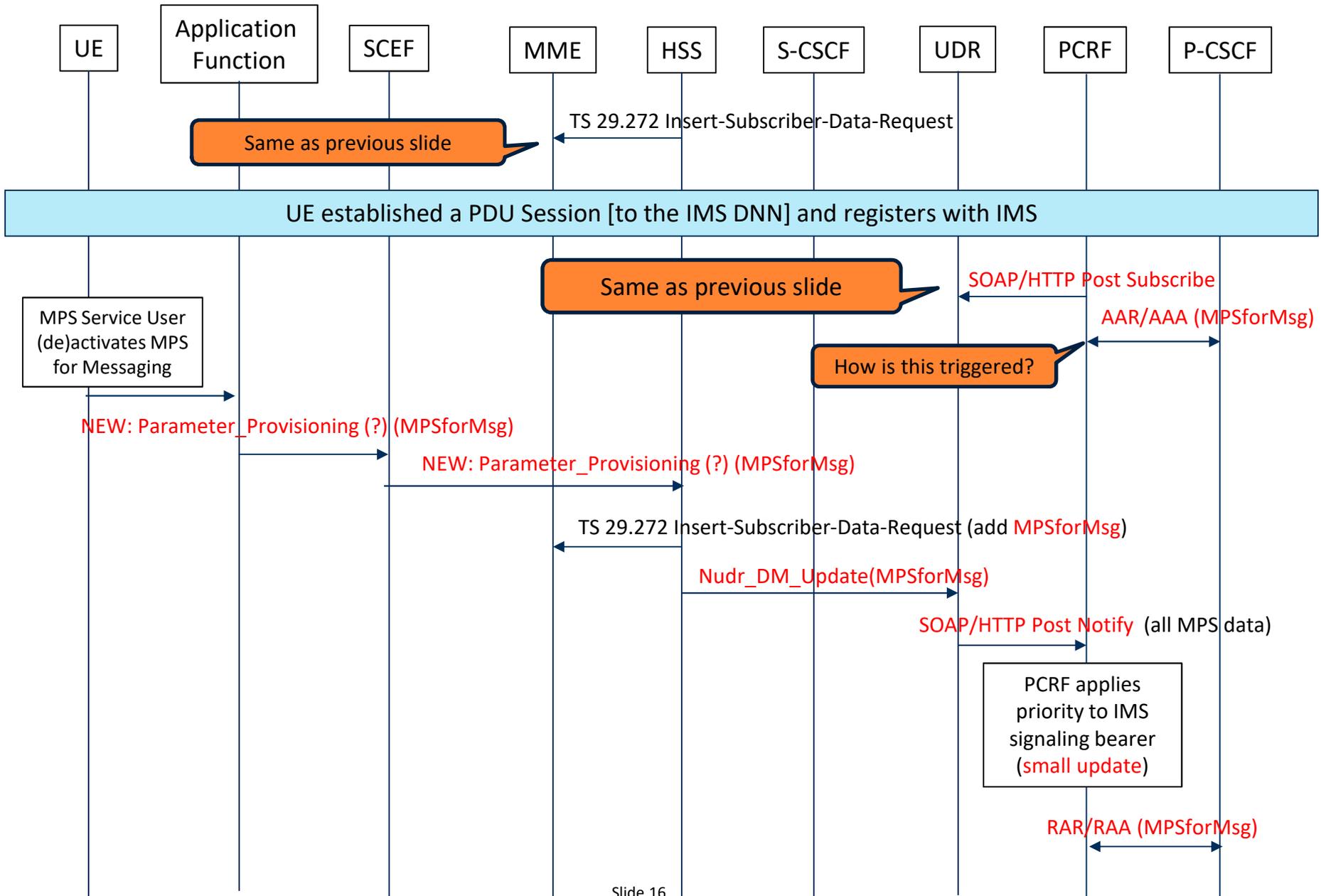
- As with 5G, this is to support a change in the MPS for messaging attribute value in SPR/UDR, i.e., activated or deactivated.
- Two paths, red and blue.
- This is for HSS-Method 1B and UDR (/SPR) methods. May not be needed for HSS-Method 1A.

# HSS Method



See slide 14; this flow only shows red path solution

# UDR Method



# 4G Comparison

- Similar as in 5G