**3GPP TSG-SA WG2 Meeting #156-eS2-2304748**

**E-Meeting, 17th – 21st April 2023**

**Title:** **[draft] Reply LS on partially allowed/rejected S-NSSAI**

**Response to:** **R3-230923**

**Release:** **Rel-18**

**Work Item:** **eNS\_Ph3**

**Source:** **SA2**

**To:** **RAN3, RAN2**

**Cc:** **None**

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Attachments: none

**1. Overall Description:**

SA2, thanks RAN3 for their Reply LS in R3-230923. SA2 has reviewed the LS and would like to provide the following answers to RAN3 questions:

NOTE: SA2 is still waiting for RAN3 to confirm the support of Partially Allowed NSSAI over NGAP.

1. Whether the Target NSSAI and Partially Allowed NSSAI could be signalled simultaneously to the NG-RAN node? And in such case, what is the expected behaviour at the NG-RAN node (also considering the Allowed NSSAI)?

The Partially allowed NSSAI potentially includes S-NSSAIs that are supported in the current TA of the UE and S-NSSAIs that are not supported in the current TA of the UE.

The NG-RAN, would be assumed to use the Partially Allowed NSSAI in a similar was as the Allowed NSSAI.

Based on current status, the Target NSSAI may be used in conjunction with the Partially allowed NSSAI only when Target NSSAI includes at least one rejected S-NSSAI in the RA as per current behaviour of Target NSSAI. There is no consensus on whether the target NSSAI can include S-NSSAIs rejected in the RA or S-NSSAIs of Partially Allowed NSSAI e.g. as to minimize or avoid NG-RAN impacts.

1. Whether and how the Partially Allowed NSSAI would work together with the slice-based cell reselection?

It is expected that the Partially Allowed NSSAI is indeed given as input into the cell reselection algorithm. The current text in TS 23.501 reads (the red text is the new text added by SA#99 approved CRs):

“The UE NAS provides to the UE AS the NSAG Information as received from the AMF and the S-NSSAIs in the Allowed NSSAI and a**ny Partially Allowed NSSAI** as input to cell reselection, except when the UE intends to register with a new **(including any S-NSSAIs rejected partially in the RA**) set of S-NSSAIs with a Requested NSSAI different from the current Allowed NSSAI, and any **Partially Allowed NSSAI**, in which case the UE NAS provides to the UE AS layer the NSAG Information as received from the AMF and the S-NSSAIs in the Requested NSSAI, and this may trigger a cell reselection, before sending the Registration Request including the new Requested NSSAI.”

1. Whether the Partially Allowed NSSAI would be associated with its own RFSP and if yes, how would this relate to existing information signalled today?   
   How would the RFSP(s) related to other information, e.g. Allowed NSSAI signaled today, relate to the Partially Allowed NSSAI?

It is expected that the AMF provides the RAN with RFSP index , taking the Allowed and the Partially Allowed NSSAI into account. This is sent instead of the RFSP sent for the Allowed NSSAI as the Partially Allowed NSSAI is sent to NG-RAN also. The current text in TS 23.501 reads as follows (the red text is the new text added by SA#99 approved CRs):

“In order to enable UE idle mode mobility control and priority-based reselection mechanism considering availability of Network Slices at the network and the Network Slices allowed for a UE, an RFSP is derived as described in clause 5.3.4.3, considering also the Allowed NSSAI, **and any Partially Allowed NSSAI** for the UE”.

1. How does the Partially Allowed NSSAI work with respect to UE-Slice-MBR?

SA2 expects to have UE-Slice-MBR information stored in the UE context in the RAN also for the S-NSSAIs of the Partially Allowed NSSAI. UE-Slice-MBR is applied for applicable S-NSSAIs when there are active PDU sessions for the S-NSSAI and it works in the same way as for S-NSSAIs in the Allowed NSSAI.

**2. Actions:**

**To RAN2 and RAN3 group.**

**ACTION:** SA2 kindly asks RAN3 and RAN2 to take the above into account and provide SA2 with feedback as soon as possible.

**3. Date of Next SA2 Meetings:**

[Next SA2 Meetings dates](https://portal.3gpp.org/Home.aspx?tbid=375&SubTB=385#/)