3GPP TSG-RAN WG3 Meeting #129 R3-25xxxx

Bengaluru, India, 25-29 Aug 2025

**Agenda item: 10.3.2**

**Source: Nokia**

**Title: Summary of the discussion on the SON for slicing**

**Document for: Discussion**

# 1 Introduction

At RAN3 #129, an offline discussion concerning SON for slicing took place. In this document, the discussion is summarised.

# 2 Discussion

The discussion focuses on the possible detection of the slice-coverage mismatch and further configuration of the AMF.

In [5446], it is proposed that:

***Observation 1: The list of supported slices per tracking area, i.e., the TAI Slice Support List, is configured by the OAM in the gNB which sends this list to the AMF via NGAP signaling.***

***Observation 2: The UE is not mandated to register on all slices that the UE was configured with and from which the UE will request services in the current Registration Area.***

***Observation 3: The UE may trigger a registration procedure at any point in time after the initial Registration to request access for services over a slice that is currently not in the Allowed/Rejected/Partially allowed NSSAI.***

***Observation 4: As the Rejected NSSAI is not sent by the AMF to the gNB in the INITIAL CONTEXT SETUP REQUEST nor in the DOWNLINK NAS TRANSPORT message, the gNB is not aware of the network slices that were requested by the UE and rejected by the AMF.***

**Proposal 1: RAN3 to discuss and agree on mechanisms to enable the gNB to request and obtain from the AMF information about the slices requested by the UE and rejected by the AMF.**

**Proposal 2: RAN3 to agree extending the INITIAL UE MESSAGE to enable the gNB to request from the AMF the list of slices requested by the UE and rejected by the AMF due to slice(s) being unsupported in the area from which UE initiated the request.**

**Proposal 3: RAN3 to agree extending the INITIAL CONTEXT SETUP REQUEST and the DOWNLINK NAS TRANSPORT messages to enable the AMF to signal to the gNB the list of slices which were requested by the UE and rejected by the AMF due to slices being unsupported in the area from which the UE initiated the request.**

**Proposal 4: RAN3 to agree the TP in [5447] and send an LS to inform SA2 about these agreements.**

A very similar statement is made in [5600].

However, in [5195], it is argued that the scenario is not possible based on SA2’s specification:

**Observation 1: In a classic, pre-Rel-18 deployment, the UE is not allowed to request PDU session establishment for a slice that was not listed as “Allowed” during the TA registration.**

**Observation 2: In Rel-18 deployments, where a slice is planned to be used in an area smaller than a TA, the AMF is configured using OAM with the S-NSSAI location availability information, which is then provided to the UE supporting the feature.**

**Observation 3: In Rel-18 deployments, there will not be a case that a supporting UE requests PDU session establishment in a cell where the needed slice is not available.**

**Observation 4: For pre-Rel-18 UEs requesting a service that is locally available in a Rel-18 deployment, where the needed slice is available in selected cells only, the signalling-based solution proposed in [1] will not help avoiding reconfiguring both, the AMF and the gNB via the OAM. Thus, the proposed signalling does not offer any optimisation.**

**Considering the above, we propose that the discussed problem of misalignment of slice coverage shall be addressed in OAM-based solution. If needed, RAN3 may send an LS to SA2 to consult the correctness of the above analysis.**

Based on these inputs, the scenario and its feasibility, shall be considered first.

Summary of the discussion:

* The analysis [5195] is considered correct. However, proponents of the new solution in [5446] focus on a pre-Rel.18 scenario, where slice support is missing in the whole TA and is detected at the registration procedure.
* During the discussion, this scenario was questioned, but an operator confirmed it is realistic. Therefore, it was proposed to send an LS to SA2.
* After the discussion, other operator, however, claimed that dynamic detection of registration requests outside of pre-planned slice support is not useful, because slice support is a network planning matter.
* In addition, the LS may delay completion of the WI (exception sheet may be required).

# 3 Conclusions

Proposal for the online discussion:

**Check if the LS is needed; if not the proposal shall be noted and the SON for slicing declared completed in RAN3.**

# References

[5195] R3-255195, Discussion on the possibility of requesting a non-registered slice (Nokia)

[5446] R3-255446, Collection of rejected slice information for slice coverage optimisation (Ericsson, BT, Deutsche Telekom, Jio Platforms (JPL), FiberCop, InterDigital)

[5447] R3-255447, (TP for BL CR to 38.413 for SON) Collection of rejected slice information for slice coverage optimisation (Ericsson, BT, Deutsche Telekom, Jio Platforms (JPL), FiberCop, InterDigital)

[5600] R3-255600, Enhanced Rejected Slice Reporting for Dynamic Slice Optimization (Jio Platforms)