3GPP TSG-CT WG3 Meeting #130 C3-234xxx

**Xiamen, China, –**

**Title: LS on Clarification related to Network Slice Replacement feature**

**Response to: NA**

**Release: Rel-18**

**Work Item: eNS\_Ph3**

**Source:** **3GPP CT3**

**To:** **3GPP SA2**

**Cc:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments:** None

# 1 Overall description

In the current TS 23.503, clause 6.1.3.5:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Network Slice Replacement | The SMF reports the event of change between S-NSSAI and Alternative S-NSSAI to PCF when the SMF determines that the PDU Session and SM Policy Association can be retained. The SMF provides Alternative S-NSSAI when the PDU Session is transferred from S-NSSAI to Alternative S-NSSAI. | Added | PCF |  |

According to the LS reply to SA4 in [S2-2309692](https://www.3gpp.org/ftp/tsg_sa/WG2_Arch/TSGS2_158_Goteborg_2023-08/Docs/S2-2309692.zip), SA2 indicates that the network slice replacement procedure should be transparent to the Application Function and Application Provider:

Q3. Are the Application Function and the Application Provider notified when the network slice replacement procedure is invoked by the 5G System?

Answer: No. SA2 believes that the network slice replacement procedure should be transparent to the Application Function and the Application Provider.

**Question 1:** According to the above, when the original S-NSSAI is replaced by an Alternative S-NSSAI, should both the original S-NSSAI and the Alternative S-NSSAI be provided by the SMF to the PCF and should both data be stored in both PCF and BSF so that the PCF/BSF can identify the PDU session/PCF associated to the AF request? (example: during Npcf\_PolicyAuthorization\_Create service operation trigger from the AF)

**Question 2**: For the case where the original S-NSSAI is recovered and then the PDU session is transferred back to the original S-NSSAI, what information (if any) is expected that the SMF provides to the PCF and then the PCF to the BSF?

**Question 3:** When the Alternative S-NSSAI becomes unavailable and the Original S-NSSAI is not yet recovered, can an additional Alternative S-NSSAI be selected? In this case, how should that be reported to the PCF and then to the BSF?

In the current TS 23.501, clause 5.15.19:

- If the PCF detects that an S-NSSAI becomes unavailable or congested for a UE (e.g. based on OAM or NWDAF analytics output), it sends access and mobility related policy notification to the AMF. The notification may include an Alternative S-NSSAI which can be used by the AMF to replace the S-NSSAI. The PCF notifies the AMF when the S-NSSAI is available again for the UE.

The AMF determines the Alternative S-NSSAI for a UE registered with the S-NSSAI based on the notification from NSSF or PCF, or based on local configuration if the NSSF or PCF do not provide an alternative S-NSSAI. The Alternative S-NSSAI shall be supported in the UE Registration Area. If AMF cannot determine the Alternative S-NSSAI for the S-NSSAI, e.g. PCF or NSSF doesn't provide Alternative S-NSSAI, the AMF may further interact with the PCF to determine the Alternative S-NSSAI. The event trigger in AMF for interacting with PCF is described in clause 6.1.2.5 of TS 23.503 [45]

**Question 4**: The above requirements with respect to PCF function, are applicable in case of both non-roaming scenario and roaming LBO scenario? If yes, then does the V-PCF need mapping of V-PLMN S-NSSAI with H-PLMN S-NSSAI information for network slice replacement policy decision during roaming LBO scenario?

# 2 Actions

**To SA2**

**ACTION:** CT3 kindly asks SA2 to answer the above questions and update the SA2 specifications if necessary.

# 3 Dates of next TSG CT WG 3 meetings

CT3 Meeting calendar can be found at:

<https://www.3gpp.org/dynareport?code=Meetings-C3.htm>