**3GPP TSG-SA WG2 Meeting #164 S2-2408080r05**

**Maastricht, 19-23 August, 2024** **(revision of S2-2402532)**

**Source: KDDI**

**Title: New WID on Network Controlled Network Slice Selection**

**Document for: Approval**

**Agenda Item: 30.2**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

Title: Network Controlled Network Slice Selection

Acronym: TEI19\_SliceSel

Unique identifier: TBD

Potential target Release: Rel-19

# 1 Impacts

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  |  |  | X | AF |
| No | X | X | X |  |  |
| Don't know |  |  |  |  |  |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study  |
|  | Normative – Stage 1 |
| X | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

**\* Other = e.g. testing**

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
|  |  |  | N/A |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
| 980017 | Stage 2 of Network Slicing Phase 3 (eNS\_Ph3) | {optional free text}  |

**Dependency on non-3GPP (draft) specification:**

# 3 Justification

Network Slicing was standardized since Rel-15. From operators’ perspective, it is required to improve the customer experience by providing the optimal network slice in accordance with the subscriber’s requirement and/or the third party’s requirement. Thus, it is beneficial for operators to have an option to replace the network slice based on a notification from the Application Function.

The URSP rules are defined and the UE can use them to determine the parameters of the PDU Session including the S-NSSAI when the UE requests a PDU Session for an application/service used by the end users. The URSP rules may be locally configured in the UE or provided from the network. The network can update the URSP rules in the UE per receiving Application guidance. Operators are also interested in network-centric mechanisms that do not depend on UE implementation of URSP

In Rel-18 network slice replacement is defined to replace the S-NSSAI with Alternative S-NSSAI for PDU Sessions when the existing S-NSSAI becomes congested. However the Network Slice Replacement notification is not triggered from the Application Function.

This work item aims to enhance the network controlled network slice replacement mechanism to achieve that the user can enjoy the application on their device via the network connection which is optimally tailored by the operator using the network slice.

# 4 Objective

The objective is to specify the following aspects to 5GC:

- Enable AF(s) (trusted and not trusted) to request the slice replacement of a subscribed S-NSSAI with another Subscribed S-NSSAI based on the AF(s) preference.

- Enable the PCF to trigger the slice replacement based on the request from AF(s)

- Adding support for slice replacement without requiring the support of the Rel-18 network slice replacement feature in the UE

No UDM impact is expected for the following aspects:

Note 1: How the AF obtains the information related S-NSSAI(s), is out of scope of this item.

Note 2: This work will require 1 TU.

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications {One line per specification. Create/delete lines as needed} |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 23.501 | Architectural enhancements to support the stated objectives | TSG-SA#103Mar 2024 |  |
| 23.502 | Architectural enhancements to support the stated objectives | TSG-SA#103Mar 2024 |  |
| 23.503 | Architectural enhancements to support the stated objectives | TSG-SA#103Mar 2024 |  |

# 6 Work item Rapporteur(s)

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# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

Security aspects covered by SA3.

OAM and charging aspects covered by SA5.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| BT |
| China Mobile |
| CKH IoD UK |
| Deutsche Telekom |
| DISH Network |
| Ericsson |
| Huawei |
| InterDigital |
| KDDI |
| Lenovo |
| MATRIXX Software |
| NEC |
| Nokia |
|  |
| OPPO |
| Oracle |
| Orange |
| Samsung |
| SHARP |
| Telefonica |
| Verizon |
| Vodafone |
| ZTE |
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