**3GPP TSG-WG SA2 Meeting #165S2-2411086**

**Hyderabad, IN, 14th Oct – 18th Oct, 2024 (revision of S2-241080)**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **23.501** | **CR** | **5750** | **rev** | **4** | **Current version:** | **19.1.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Support of N3GPP device behind UE/5G-RGas concluded in TS 23.700-34 KI#4 |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon, InterDigital Inc., Deutsche Telekom, NEC |
| ***Source to TSG:*** | SA2 |
|  |  |
| ***Work item code:*** | UIA\_ARC |  | ***Date:*** | 2024-10-14 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-19 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | The UIA\_ARC WID includes that adding support of Non-3GPP device connecting behind a UE as concluded in the TR 23.700-32 KI#4.  |
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| ***Summary of change:*** | To support Non-3GPP device connecting behind the UE the following changes are needed:1. Introduction of general part description and how identification of traffic from Non-3GPP device connecting behind a UEis supported.
2. Session management
3. QoS differentiation
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| ***Consequences if not approved:*** | The conclusion of KI#4 would not be implemented |
|  |  |
| ***Clauses affected:*** | 5.x (new), 5.x.1 (new), 5.x.2 (new), 5.x.3 (new), 5.x.4 (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* \* First change \* \* \* \*

## 5.x QoS differentiation of traffic for Non-3GPP Device Identifier

### 5.x.1 General

This clause specifies the scenario of a non-3GPP device connecting through the UE. In this scenario QoS traffic differentiation is applied to the traffic that originates from or is directed to the non-3GPP device. The non-3GPP device does not use NAS and is not authenticated by 5GC.

The support of identification of traffic for non-3GPP devices connecting behind a 5G-RG is specified in TS 23.316 [84].

The Non-3GPP Device Identifier is unique within the scope of the UE’s SUPI.

### 5.x.2 Traffic identification

When a non-3GPP device is connecting to the UE , the UE binds a Non-3GPP Device Identifier to the traffic from and to the non-3GPP device, for the traffic of non-3GPP devices that require differentiated QoS. This binding enables the 5G System to distinguish between the traffic generated by different non-3GPP devices connected through the same UE. How the UE identifies the non-3GPP device and binds the traffic of the non-3GPP device to a Non-3GPP Device Identifier is implementation specific.

NOTE: At any point in time the Non-3GPP Device Identifier can be bound to only one non-3GPP device.

Non-3GPP Device Identifier Information is stored in the UDR and includes a Non-3GPP Device Identifier and QoS Information.

### 5.x.3 Session management enhancement

For the traffic of non-3GPP devices requiring differentiated QoS:

* For Ethernet PDU Session Type, the UE sends the Non-3GPP Device Identifier and may also send MAC address and/or the VLAN tag ID that is associated with the Non-3GPP Device Identifier to the SMF in PDU Session Modification procedure.
* For IPv4 PDU Session Type, the UE sends the Non-3GPP Device Identifier and may also send the IP Address and/port ranges associated with the Non-3GPP Device Identifier to the SMF in PDU Session Modification procedure.
* For IPv6 PDU Session Type, the UE sends the Non-3GPP Device Identifier and may also send the IPv6 Address/prefix(sub) that is associated with the Non-3GPP Device Identifier to the SMF in PDU Session Modification procedure.

Editor’s note: whether the the UE sends the Non-3GPP Device Identifier and user plane information (e.g. IP Address) in PDU session establishment is FFS.

### 5.x.4 QoS differentiation

QoS differentiation and policy control is defined in TS 23.503 [45] clause 6.1.3.xx

\* \* \* \* End of changes \* \* \* \*