**3GPP TSG-CT WG1 Meeting #127-eC1-20xxxx**

**Electronic meeting, 13-20 November 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **24.501** | **CR** | **2933** | **rev** | **1** | **Current version:** | **17.0.0** |  |
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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 |  |

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| ***Title:***  | Adding the case “accessing to 5GCN of the SNPN via Nwu” for non-3GPP access when the UE is operating in SNPN access mode |
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| ***Source to WG:*** | China Mobile |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | 5GProtoc17 |  | ***Date:*** | 2020-11-6 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-17 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)* |
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| ***Reason for change:*** | In the current version of TS24.501, it is mentioned that when UE operates in SNPN access mode, "non-3GPP access" refers to the case the UE is accessing SNPN services via a PLMN. But there could be another case-- when the UE is operating in SNPN access mode, accessing to 5GCN of the SNPN via Uu, it can access to 5GCN of the SNPN via Nwu.It is suggested not exclude the case “accessing to 5GCN of the SNPN via Nwu” for the UE operating in SNPN access mode. |
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| ***Summary of change:*** | Add the case “accessing to 5GCN of the SNPN via Nwu”. |
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| ***Consequences if not approved:*** | The description of the case “accessing to 5GCN of the SNPN via Nwu” is not mentioned. |
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| ***Clauses affected:*** | 4.5.2A |
|  |  |
|  | **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:*** |  |
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| ***This CR's revision history:*** | 1. Update the cover sheet.
2. Correct the revised part and add the case “accessing to 5GCN of the SNPN via Nwu” to the NOTE 11.
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### 4.5.2A Determination of the access identities and access category associated with a request for access for UEs operating in SNPN access mode

When the UE needs to initiate an access attempt in one of the events listed in subclause 4.5.1, the UE shall determine one or more access identities from the set of standardized access identities, and one access category from the set of standardized access categories and operator-defined access categories, to be associated with that access attempt.

The set of the access identities applicable for the request is determined by the UE in the following way:

a) for each of the access identities 1, 2, 11, 12, 13, 14 and 15 in table 4.5.2A.1, the UE shall check whether the access identity is applicable in the selected SNPN, if a new SNPN is selected, or otherwise if it is applicable in the RSNPN; and

b) if none of the above access identities is applicable, then access identity 0 is applicable.

Table 4.5.2A.1: Access identities

|  |  |
| --- | --- |
| Access Identity number | UE configuration |
| 0 | UE is not configured with any parameters from this table |
| 1 (NOTE 1) | UE is configured for multimedia priority service (MPS). |
| 2 (NOTE 2) | UE is configured for mission critical service (MCS). |
| 3-10 | Reserved for future use |
| 11 (NOTE 3) | Access Class 11 is configured in the UE. |
| 12 (NOTE 3) | Access Class 12 is configured in the UE. |
| 13 (NOTE 3) | Access Class 13 is configured in the UE. |
| 14 (NOTE 3) | Access Class 14 is configured in the UE. |
| 15 (NOTE 3) | Access Class 15 is configured in the UE. |
| NOTE 1: Access identity 1 is valid when:- the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) indicates the UE is configured for access identity 1 in the selected SNPN, if a new SNPN is selected, or RSNPN; or- the UE receives the 5GS network feature support IE with the MPS indicator bit set to "Access identity 1 valid" from the RSNPN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4.NOTE 2: Access identity 2 is used by UEs configured for MCS and is valid when:- the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) indicates the UE is configured for access identity 2 in the selected SNPN, if a new SNPN is selected, or RSNPN; or- the UE receives the 5GS network feature support IE with the MCS indicator bit set to "Access identity 2 valid" from the RSNPN as described in subclause 5.5.1.2.4 and subclause 5.5.1.3.4.NOTE 3: Access identities 11 to 15 are valid if indicated as configured for the UE in the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) in the selected SNPN, if a new SNPN is selected, or RSNPN. |

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) and the rules specified in table 4.5.2A.1 are used to determine the applicability of access identity 1 in the SNPN. When the contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) do not indicate the UE is configured for access identity 1 for the SNPN, the UE uses the MPS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message to determine if access identity 1 is valid.

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) and the rules specified in table 4.5.2A.1 are used to determine the applicability of access identity 2 in the SNPN. When the contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) do not indicate the UE is configured for access identity 2 for the SNPN, the UE uses the MCS indicator bit of the 5GS network feature support IE in the REGISTRATION ACCEPT message to determine if access identity 2 is valid.

The contents of the unified access control configuration in the "list of subscriber data" stored in the ME (see 3GPP TS 23.122 [5]) and the rules specified in table 4.5.2A.1 are used to determine the applicability of access classes 11 to 15 in the SNPN.

In order to determine the access category applicable for the access attempt, the NAS shall check the rules in table 4.5.2A.2, and use the access category for which there is a match for barring check. If the access attempt matches more than one rule, the access category of the lowest rule number shall be selected. If the access attempt matches more than one operator-defined access category definition, the UE shall select the access category from the operator-defined access category definition with the lowest precedence value (see subclause 4.5.3).

NOTE: The case when an access attempt matches more than one rule includes the case when multiple events trigger an access attempt at the same time.

Table 4.5.2A.2: Mapping table for access categories

|  |  |  |  |
| --- | --- | --- | --- |
| Rule # | Type of access attempt | Requirements to be met | Access Category |
| 1 | Response to paging or NOTIFICATION over non-3GPP access (NOTE 11);5GMM connection management procedure initiated for the purpose of transporting an LPP message without an ongoing 5GC-MO-LR procedure;Access attempt to handover of MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access | Access attempt is for MT access, or handover of ongoing MMTEL voice call, MMTEL video call or SMSoIP from non-3GPP access | 0 (= MT\_acc) |
| 2 | Emergency | UE is attempting access for an emergency session (NOTE 1, NOTE 2) | 2 (= emergency) |
| 3 | Access attempt for operator-defined access category | UE stores operator-defined access category definitions valid in the SNPN as specified in subclause 4.5.3, and access attempt is matching criteria of an operator-defined access category definition | 32-63 (= based on operator classification) |
| 4 | Access attempt for delay tolerant service | (a) UE is configured for NAS signalling low priority, and(b) the UE received one of the categories a, b or c as part of the parameters for unified access control in the broadcast system information, and the UE is a member of the broadcasted category in the selected SNPN or RSNPN (NOTE 3, NOTE 5, NOTE 6, NOTE 7, NOTE 8) | 1 (= delay tolerant) |
| 4.1 | MO IMS registration related signalling | Access attempt is for MO IMS registration related signalling (e.g. IMS initial registration, re-registration, subscription refresh)or for NAS signalling connection recovery during ongoing procedure for MO IMS registration related signalling (NOTE 2a) | 9 (= MO IMS registration related signalling) |
| 5 | MO MMTel voice call | Access attempt is for MO MMTel voice call or for NAS signalling connection recovery during ongoing MO MMTel voice call (NOTE 2) | 4 (= MO MMTel voice) |
| 6 | MO MMTel video call | Access attempt is for MO MMTel video call or for NAS signalling connection recovery during ongoing MO MMTel video call (NOTE 2) | 5 (= MO MMTel video) |
| 7 | MO SMS over NAS or MO SMSoIP | Access attempt is for MO SMS over NAS (NOTE 4) or MO SMS over SMSoIP transferor for NAS signalling connection recovery during ongoing MO SMS or SMSoIP transfer (NOTE 2) | 6 (= MO SMS and SMSoIP) |
| 8 | UE NAS initiated 5GMM specific procedures | Access attempt is for MO signalling | 3 (= MO\_sig) |
| 8.1 | Mobile originated location request | Access attempt is for mobile originated location request (NOTE 9) | 3 (= MO\_sig) |
| 8.2 | Mobile originated signalling transaction towards the PCF | Access attempt is for mobile originated signalling transaction towards the PCF (NOTE 10) | 3 (= MO\_sig) |
| 9 | UE NAS initiated 5GMM connection management procedure or 5GMM NAS transport procedure | Access attempt is for MO data | 7 (= MO\_data) |
| 10 | An uplink user data packet is to be sent for a PDU session with suspended user-plane resources | No further requirement is to be met | 7 (= MO\_data) |
| NOTE 1: In this release of the specification, there is no support for establishing an emergency session in an SNPN.NOTE 2: Access for the purpose of NAS signalling connection recovery during an ongoing service as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing service as defined in subclause 4.5.5, is mapped to the access category of the ongoing service in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.NOTE 2a: Access for the purpose of NAS signalling connection recovery during an ongoing MO IMS registration related signalling as defined in subclause 4.5.5, or for the purpose of NAS signalling connection establishment following fallback indication from lower layers during an ongoing MO IMS registration related signalling as defined in subclause 4.5.5, is mapped to the access category of the MO IMS registration related signalling in order to derive an RRC establishment cause, but barring checks will be skipped for this access attempt.NOTE 3: If the UE selects a new SNPN, then the selected SNPN is used to check the membership; otherwise the UE uses the RSNPN.NOTE 4: This includes the 5GMM connection management procedures triggered by the UE-initiated NAS transport procedure for transporting the MO SMS. NOTE 5: The UE configured for NAS signalling low priority is not supported in this release of specification.NOTE 6: If the access category applicable for the access attempt is 1, then the UE shall additionally determine a second access category from the range 3 to 7. If more than one access category matches, the access category of the lowest rule number shall be chosen. The UE shall use the second access category only to derive an RRC establishment cause for the access attempt.NOTE 7: Void.NOTE 8: For the definition of categories a, b and c associated with access category 1, see 3GPP TS 22.261 [3]. The categories associated with access category 1 are distinct from the categories a, b and c associated with EAB (see 3GPP TS 22.011 [1A]).NOTE 9: This includes:a) the UE-initiated NAS transport procedure for transporting a mobile originated location request;b) the 5GMM connection management procedure triggered by a) above; andc) NAS signalling connection recovery during an ongoing 5GC-MO-LR procedure.NOTE 10: This includes:a) the UE-initiated NAS transport procedure for transporting a mobile originated signalling transaction towards the PCF;b) the 5GMM connection management procedure triggered by a) above; andc) NAS signalling connection recovery during an ongoing UE triggered V2X policy provisioning procedure.NOTE 11: The term "non-3GPP access" refers to the case when the UE is accessing SNPN services via a PLMN and the case the UE is accessing to 5GCN of the SNPN via Mwu as well. |

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