**3GPP TSG-CT WG4 Meeting #99eC4-204xxx**

**E-Meeting, 18th – 28th August 2020 *Revision of C4-204157***

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.518** | **CR** | **0381** | **rev** | **1** | **Current version:** | **16.4.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | SNSSAI during mobility procedure | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei | | | | | | | | | |
| ***Source to TSG:*** | CT4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI16, 5GS\_Ph1-CT | | | | |  | ***Date:*** | | | 2020-08-06 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-16 |
|  | *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 can be 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)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Defined in clause 4.9.1.3.2, Preparation phase of the N2 based handover:  *In inter PLMN mobility case, UE context information includes HPLMN S-NSSAIs corresponding to the Allowed NSSAI for each Access Type, without Allowed NSSAI of source PLMN. The target AMF may determine the Allowed NSSAI based on the HPLMN S-NSSAIs received in step 3, or else the target AMF queries the NSSF by invoking Nnssf\_NSSelection\_Get service operation with the HPLMN S-NSSAIs and PLMN ID of SUPI.*  For the scenario, UE (home PLMN1) moves from source AMF (PLMN2) to target AMF (PLMN3), the source AMF just includes the HPLMN1 S-NSSAIs corresponding to the Allowed NSSAI in PLMN2, and no need to include the Allowed NSSAI in PLMN2 to the target AMF.  Current specification defines two IEs: allowedNssai and nssaiMappingList, it is not be able to only send the home S-NSSAI related to the allowedNssai.  NOTE: target AMF does not know the PLMN of the source AMF, based on the current definition, if the source AMF sends allowed NSSAI in PLMN2 and the mapping NSSAI to the target AMF, target AMF does not know the mapping information can be used or not. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Define a New IE named allowedHomeNssai for the inter PLMN mobility case | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Incorrect Mapping of S-NSSAIs in target AMF | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.1.6.2.34, A.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 introduces backward compatible corrections to the OpenAPI file for *Namf\_Communication* API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | Rev1:  Correct the work item code;  Update the description of the IEs. | | | | | | | | |

\* \* \* First Change \* \* \* \*

##### 6.1.6.2.34 Type: MmContext

Table 6.1.6.2.34-1: Definition of type MmContext

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute name | Data type | P | Cardinality | Description |
| accessType | AccessType | M | 1 | This IE shall contain the access type of the MM context. |
| nasSecurityMode | NasSecurityMode | C | 0..1 | This IE shall be present if available in 3GPP access MM context. When present, this IE shall contain the used NAS security mode of the UE. |
| nasDownlinkCount | NasCount | C | 0..1 | This IE shall be present if available in 3GPP access MM context. When present, this IE shall contain the NAS downlink count of the UE. |
| nasUplinkCount | NasCount | C | 0..1 | This IE shall be present if available in 3GPP access MM context. When present, this IE shall contain the NAS uplink count of the UE. |
| ueSecurityCapability | UeSecurityCapability | C | 0..1 | This IE shall be present if available in 3GPP access MM context. When present, this IE shall contain the UE security capability |
| s1UeNetworkCapability | S1UeNetworkCapability | C | 0..1 | This IE shall be present if available in 3GPP access MM context. When present, this IE shall contain the S1 UE network capabilities. |
| allowedNssai | array(Snssai) | C | 1..N | This IE shall be present if the source AMF and the target AMF are in the same PLMN and if available. When present, this IE shall contain the allowed NSSAI for the access type. |
| nssaiMappingList | array(NssaiMapping) | C | 1..N | This IE shall be present if the source AMF and the target AMF are in the same PLMN and if available. When present, this IE shall contain the mapping of the allowed NSSAI for the UE. |
| allowedHomeNssai | array(Snssai) | C | 1..N | This IE shall be present if the source AMF and the target AMF are in the different PLMN and if available. When present, this IE shall contain the home S-NSSAIs corresponding to the allowed NSSAI for the access type. |
| nsInstanceList | array(NsiId) | C | 1..N | This IE shall be present if available. When present, it shall indicate the Network Slice Instances selected for the UE. |
| expectedUEbehavior | ExpectedUeBehavior | C | 0..1 | This IE shall be present if available. When present it shall indicate the expected UE moving trajectory and its validity period. See 3GPP TS 23.502 [3] clause 4.15.6.3. |
| plmnAssiUeRadioCapId | PlmnAssiUeRadioCapId | C | 0..1 | This IE shall be present if the source AMF supports RACS feature and if available. When present it shall be the PLMN-assigned UE Radio Capability ID. |
| manAssiUeRadioCapId | ManAssiUeRadioCapId | C | 0..1 | This IE shall be present if the source AMF supports RACS feature and if available. When present it shall be the Manufacturer-assigned UE Radio Capability ID. |
| ucmfDicEntryId | string | C | 0..1 | This IE shall be present if the source AMF supports RACS feature and if available. When present it shall be the UCMF allocated dicEntryId received from the UCMF. |
| n3IwfId | GlobalRanNodeId | C | 0..1 | This IE shall be present during Registration procedure with AMF changes as specified in clause 4.2.2.2 of 3GPP TS 23.502 [3], if old AMF holds UE context established via N3IWF.  When present, this IE shall contain the Global RAN Node ID of N3IWF. |
| wagfId | GlobalRanNodeId | C | 0..1 | This IE shall be present during Registration procedure with AMF changes as specified in clause 4.2.2.2 of 3GPP TS 23.502 [3], if old AMF holds UE context established via W-AGF.  When present, this IE shall contain the Global RAN Node ID of W-AGF. |
| tngfId | GlobalRanNodeId | C | 0..1 | This IE shall be present during Registration procedure with AMF changes as specified in clause 4.2.2.2 of 3GPP TS 23.502 [3], if old AMF holds UE context established via TNGF.  When present, this IE shall contain the Global RAN Node ID of TNGF. |
| anN2ApId | integer | C | 0..1 | This IE shall be present during Registration procedure with AMF changes, as specified in clause 4.2.2.2 of 3GPP TS 23.502 [3], if old AMF holds UE context established via N3IWF/W-AGF/TNGF and the UE is in CM-CONNECTED state via N3IWF/W-AGF/TNGF.  When present, this IE shall contain the RAN UE NGAP ID over N2 interface. |
| nssaaStatusList | array(NssaaStatus) | C | 1..N | This IE shall be present if available. When present, it shall contain the subscribed S-NSSAIs subject to NSSAA procedure and for which a status information is available. See 3GPP TS 23.501 [2] clause 5.15.5.2.1 and 3GPP TS 23.502 [3] clause 5.2.2.2.2. |
| pendingNssaiMappingList | array(NssaiMapping) | C | 1..N | This IE shall be present if available. When present, this IE shall contain the mapping of the pending NSSAI for the UE. |

\* \* \* Next Change \* \* \* \*

## A.2 Namf\_Communication API

openapi: 3.0.0

info:

version: 1.1.0

title: Namf\_Communication

description: |

AMF Communication Service

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[…]

MmContext:

type: object

properties:

accessType:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/AccessType'

nasSecurityMode:

$ref: '#/components/schemas/NasSecurityMode'

nasDownlinkCount:

$ref: '#/components/schemas/NasCount'

nasUplinkCount:

$ref: '#/components/schemas/NasCount'

ueSecurityCapability:

$ref: '#/components/schemas/UeSecurityCapability'

s1UeNetworkCapability:

$ref: '#/components/schemas/S1UeNetworkCapability'

allowedNssai:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

nssaiMappingList:

type: array

items:

$ref: '#/components/schemas/NssaiMapping'

minItems: 1

allowedHomeNssai:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/Snssai'

minItems: 1

nsInstanceList:

type: array

items:

$ref: 'TS29531\_Nnssf\_NSSelection.yaml#/components/schemas/NsiId'

minItems: 1

expectedUEbehavior:

$ref: '#/components/schemas/ExpectedUeBehavior'

plmnAssiUeRadioCapId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/PlmnAssiUeRadioCapId'

manAssiUeRadioCapId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/ManAssiUeRadioCapId'

ucmfDicEntryId:

type: string

n3IwfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/GlobalRanNodeId'

wagfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/GlobalRanNodeId'

tngfId:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/GlobalRanNodeId'

anN2ApId:

type: integer

nssaaStatusList:

type: array

items:

$ref: 'TS29571\_CommonData.yaml#/components/schemas/NssaaStatus'

minItems: 1

pendingNssaiMappingList:

type: array

items:

$ref: '#/components/schemas/NssaiMapping'

minItems: 1

required:

- accessType

[…]

\* \* \* End of Changes \* \* \* \*