**3GPP TSG- Meeting #s3i240724**

**, , -**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** | **3** | **Current version:** |  |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | SA3LI (Ministère Economie et Finances, OTD\_US) | | | | | | | | | |
| ***Source to TSG:*** | SA3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Information about the initial UE context is intercepted. Any update of the UE context information is not intercepted. Update of UE context information occurs when the AMF sends a UE Context Modification request or Downlink NAS transport message to the gNB.  - UE context modification is only exchanged if information related to initial UE context needs to be updated by AMF at the gNB, i.e., some UE’s subscription data have changed or the AMF serving the UE has changed.  - Downlink NAS transport message is exchanged only if the AMF needs to sends a NAS message to the UE. This message is mostly sent when SMS messages over NAS are exchanged, at registration/reregistration of The UE and when a PDU session is established/modified/released. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Update the UE context when the AMF sends the Downlink NAS transport or the UE CONTEXT MODIFICATION REQUEST to NG-RAN  Only a part of the UE context modification request is intercepted | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Initial UE Context would not be updated | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | new clauses 6.2.2.2.14; 6.2.2.2A.15; 6.2.2.2A.16; and 6.2.2.3 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **\*** | Other core specifications | | | | TS/TR ... CR … | | |
| ***affected:*** | |  | **\*** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **\*** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | This CR is associated with CR 0678  Schema changes for this CR can be found on the Forge:  Merge Request: <https://forge.3gpp.org/rep/sa3/li/-/merge_requests/284>  Commit Hash: <https://forge.3gpp.org/rep/sa3/li/-/commit/9109dc974b14e095f31f34b3ce39d7bf05be1a2e> | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | | s3i240655, s3i240675; s3i240676 | | | | | | | | |

START OF FIRST CHANGE

##### 6.2.2.2.14 UE context update

The IRI-POI present in the AMF shall generate an xIRI containing an AMFUEContextUpdate record when the IRI-POI present in the AMF detects that the AMF provides the NG-RAN with updated UE context. Accordingly, the IRI-POI in the AMF generates the xIRI when one of the following events is detected:

- AMF sends a UE CONTEXT MODIFICATION REQUEST message to the NG-RAN.

- AMF sends a DOWNLINK NAS TRANSPORT message to the NG-RAN.

Table 6.2.2.2.14-1: Payload for AMFUEContextUpdate record

| Field name | Type | Cardinality | Description | M/C/O |
| --- | --- | --- | --- | --- |
| userIdentifiers | UserIdentifiers | 1 | List of identifiers, including the target identifier, associated with the target UE registration stored in the AMF context. See TS 29.518 [22]clause 6.1.6.2.25. | M |
| rANUEContextModification | RANUEContextModification | 0..1 | Provides information sent in the UE CONTEXT MODIFICATION REQUEST message from the AMF to the RAN for a target. See TS 38.413 [23] clause 9.2.2.7 (See NOTE). | C |
| rANDownlinkNASTransport | RANDownlinkNASTransport | 0..1 | Provides information sent in the DOWNLINK NAS TRANSPORT message from the AMF to the RAN for a target. See TS 38.413 [23] clause 9.2.5.2 (See NOTE). | C |
| NOTE: Either rANUEContextModification or rANDownlinkNASTransport shall be present. | | | | |

END OF FIRST CHANGE

START OF SECOND CHANGE

##### 6.2.2.2A.15 Type: RANUEContextModification

The purpose of the RANUEContextModification type is to provide information the AMF sends to the NG-RAN to request the modification of the UE context. Encoded per TS 38.413 [23] clause 9.2.2.7.

Table 6.2.2.2A.15-1 contains the details for the RANUEContextModification type.

Table 6.2.2.2A.15-1: Structure of the RANUEContextModification type

| Field name | Type | Cardi nality | Description | M/C/O |
| --- | --- | --- | --- | --- |
| aMFUENGAPID | AMFUENGAPID | 1 | Identity that the AMF uses to uniquely identify the target UE over the NG Interface, See TS 38.413 [23] clause 9.3.3.1. | M |
| rANUENGAPID | RANUENGAPID | 1 | Identity that the AMF receives from the NG-RAN node uniquely identifying the target UE within the NG-RAN Node. See TS 38.413 [23] clause 9.3.3.2. | M |
| rATFrequencySelectionPriority | RATFrequencySelectionPriority | 0..1 | Used to define local configuration for RRM strategies. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] 9.3.1.61. | C |
| newAMFUENGAPID | AMFUENGAPID | 0..1 | New Identity that the AMF uses to uniquely identify the target UE over the NG Interface. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.3.1. | C |
| newGUAMI | GUAMI | 0..1 | New serving AMF’s GUAMI, shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. Format is defined in TS 29.571 [17] clause 5.3.4.1. | C |
| iABAuthorizedIndicator | IABAuthorizedIndicator | 0..1 | Provides information about the authorization status of the UE to operate as an IAB node. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.129. | C |
| nRV2XServicesAuthorization | NRV2XServicesAuthorization | 0..1 | Provides information on the authorization status of the UE to use the NR sidelink for V2X services. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.146. | C |
| lTEV2XServiceAuthorization | LTEV2XServiceAuthorization | 0..1 | Provides information on the authorization status of the UE to use the LTE sidelink for V2X services. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.147. | C |
| rGLevelWirelineAccessCharacteristics | OCTET STRING | 0..1 | Indicates the wireline access technology specific QoS information corresponding to a specific wireline access subscription. Shall Include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. Specified in TS 23.316 [122] clause 4.5.1.2. | C |
| uERadioCapabilityID | OCTET STRING | 0..1 | Identifier used to represent a set of UE radio capabilities. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. Defined in TS 23.003 [19] clause 29.2. | C |
| fiveGProSeAuthorizationIndication | FiveGProSeAuthorizationIndication | 0..1 | Provides information on the authorization status of the UE to use ProSe services. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. Defined in TS 38.413 [23] clause 9.3.1.233. | C |
| mobileIABAuthorizedIndicator | MobileIABAuthorizedIndicator | 0..1 | Provides information about the authorization status of the UE to operate as a mobile IAB node. Shall include when sent in the UE CONTEXT MODIFICATION REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.259. | C |

##### 6.2.2.2A.16 Type: RANDownlinkNASTransport

The purpose of the RANDownlinkNASTransport type is to provide information the AMF sends to the NG-RAN when a NAS message needs to be delivered transparently via the NG-RAN node to the UE. Encoded per TS 38.413 [23] clause 9.2.5.2.

Table 6.2.2.2A.16-1 contains the details for the RANDownlinkNASTransport type.

Table 6.2.2.2A.16-1: Structure of the RANDownlinkNASTransport type

| Field name | Type | Cardi nality | Description | M/C/O |
| --- | --- | --- | --- | --- |
| aMFUENGAPID | AMFUENGAPID | 1 | Identity that the AMF uses to uniquely identify the target UE over the NG Interface, See TS 38.413 [23] clause 9.3.3.1. | M |
| rANUENGAPID | RANUENGAPID | 1 | Identity that the AMF receives from the NG-RAN node uniquely identifying the target UE within the NG-RAN Node. See TS 38.413 [23] clause 9.3.3.2. | M |
| oldAMF | GUAMI | 0..1 | Previous serving AMF’s GUAMI, shall include when sent in the DOWNLINK NAS TRANSPORT. Identifies the previous AMF the UE-associated logical NG-connection was redirected from. Format is defined in TS 29.571 [17] clause 5.3.4.1. | C |
| allowedNSSAI | AllowedNSSAI | 0..1 | Indicates the S-NSSAIs permitted by the network. | C |
| mobilityRestrictionList | MobilityRestrictionList | 0..1 | Provides roaming or access restrictions related to mobility from AMF to the RAN Node. Shall include when sent in the DOWNLINK NAS TRANSPORT REQUEST or when known at the NF. See TS 38.413 [23] clause 9.3.1.85. | C |
| rATFrequencySelectionPriority | RATFrequencySelectionPriority | 0..1 | Used to define local configuration for RRM strategies. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. See TS 38.413 [23] 9.3.1.61. | C |
| uEDifferentiationInfo | UEDifferentiationInfo | 0..1 | Provides information about the behavior of a UE with predictable activity and/or mobility behavior. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. See TS 38.413 [23] clause 9.3.1.144. | C |
| uERadioCapability | UERadioCapability | 0..1 | Contains the UE Radio Capability information. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. Defined in TS 38.413 [23] clauses 9.3.1.74, and 9.3.1.74a. | C |
| uERadioCapabilityID | OCTET STRING | 0..1 | Identifier used to represent a set of UE radio capabilities. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. Defined in TS 23.003 [19] clause 29.2. | C |
| targetNSSAIInfo | TargetNSSAIInfo | 0..1 | Contains the Target NSSAI and Index to RAT/Frequency Selection Priority. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. Defined in TS 38.413 [23] clause 9.3.1.229. | C |
| mobileIABAuthorizedIndicator | MobileIABAuthorizedIndicator | 0..1 | Provides information about the authorization status of the UE to operate as a mobile IAB node. Shall include when sent in the DOWNLINK NAS TRANSPORT or when known at the NF. See TS 38.413 [23] clause 9.3.1.259. | C |

END OF SECOND CHANGE

START OF THIRD CHANGE

#### 6.2.2.3 Generation of IRI over LI\_HI2

When an xIRI is received over LI\_X2 from the IRI-POI in AMF, the MDF2 shall generate the corresponding IRI message and deliver over LI\_HI2 without undue delay. The IRI message shall contain a copy of the relevant record received in the xIRI over LI\_X2. This record may be enriched with any additional information available at the MDF (e.g. additional location information).

The ETSI TS 102 232-1 [9] *@LI-PS-PDU.pSHeader.timeStamp* shall be set to the time at which the AMF event was observed (i.e. the timestamp field of the X2 PDU).

The *@LI-PS-PDU.payload.iRIPayloadSequence.iRIType* parameter (see ETSI TS 102 232-1 [9] clause 5.2.10) shall be included and coded according to table 6.2.2-7.

Table 6.2.2-7: IRI type for IRI messages

| IRI message | IRI type |
| --- | --- |
| AMFRegistration | REPORT |
| AMFDeregistration | REPORT |
| AMFLocationUpdate | REPORT |
| AMFStartOfInterceptionWithRegisteredUE | REPORT |
| AMFUnsuccessfulProcedure | REPORT |
| AMFIdentifierAssociation | REPORT |
| AMFPositioningInfoTransfer | REPORT |
| AMFRANHandoverCommand | REPORT |
| AMFRANHandoverRequest | REPORT |
| AMFUEConfigurationUpdate | REPORT |
| AMFRANTraceReport | REPORT |
| AMFUEPolicyTransfer | REPORT |
| AMFUEServiceAccept | REPORT |
| AMFUEContextUpdate | REPORT |

END OF THIRD CHANGE

START OF ANNEX (ASN.1)

START OF CHANGE 1

---a/33128/r19/TS33128Payloads.asn  
+++b/33128/r19/TS33128Payloads.asn

@@ -278,7 +278,10 @@ XIRIEvent ::= CHOICE

278 278 uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication,

279 279

280 280 -- IP Packet Report, see clause 6.2.3.9.5

281 - iPIRIPacketReport [161] IPAccessPDU.IPIRIPacketReport

281 + iPIRIPacketReport [161] IPAccessPDU.IPIRIPacketReport,

282 +

283 + -- AMF events, see clause 6.2.2.2.14, continued from tag 147

284 + aMFUEContextUpdate [162] AMFUEContextUpdate

282 285 }

283 286

284 287 -- ==============

@@ -538,9 +541,12 @@ IRIEvent ::= CHOICE

538 541

539 542 -- UDM events, see clause 7.2.2.3, continued from tag 124

540 543 uDMProSeTargetIdentifierDeconcealment [159] UDMProSeTargetIdentifierDeconcealment,

541 - uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication

544 + uDMProSeTargetAuthentication [160] UDMProSeTargetAuthentication,

542 545

543 546 -- Tag 161 is reserved because there is no equivalent IP Packet Report in IRIEvent.

547 +

548 + -- AMF events, see clause 6.2.2.3, continued from tag 147

549 + aMFUEContextUpdate [162] AMFUEContextUpdate

544 550 }

545 551

546 552 IRITargetIdentifier ::= SEQUENCE

@@ -1185,12 +1191,6 @@ SCSASID ::= UTF8String

1185 1191

1186 1192 SCEFID ::= UTF8String

1187 1193

1188 - PeriodicCommunicationIndicator ::= ENUMERATED

1189 - {

1190 - periodic(1),

1191 - nonPeriodic(2)

1192 - }

1193 -

1194 1194 EPSBearerID ::= INTEGER (0..255)

1195 1195

1196 1196 APN ::= UTF8String

@@ -1572,7 +1572,7 @@ AMFUEPolicyTransfer ::= SEQUENCE

1572 1572 uEPolicy [6] UEPolicy

1573 1573 }

1574 1574

1575 - -- See clause 6.2.2.2.12 for details of this structure

1575 + -- See clause 6.2.2.2.13 for details of this structure

1576 1576 AMFUEServiceAccept ::= SEQUENCE

1577 1577 {

1578 1578 userIdentifiers [1] UserIdentifiers,

@@ -1588,6 +1588,14 @@ AMFUEServiceAccept ::= SEQUENCE

1588 1588 uERequestType [10] MUSIMUERequestType OPTIONAL

1589 1589 }

1590 1590

1591 + -- See clause 6.2.2.2.14 for details of this structure

1592 + AMFUEContextUpdate ::= SEQUENCE

1593 + {

1594 + userIdentifiers [1] UserIdentifiers,

1595 + rANUEContextModification [2] RANUEContextModification OPTIONAL,

1596 + rANDownlinkNASTransport [3] RANDownlinkNASTransport OPTIONAL

1597 + }

1598 +

1591 1599 -- =================

1592 1600 -- 5G AMF parameters

1593 1601 -- =================

@@ -1917,6 +1925,53 @@ FiveGSUpdateType ::= OCTET STRING (SIZE(1))

1917 1925

1918 1926 UnavailabilityPeriodDuration ::= OCTET STRING (SIZE(1))

1919 1927

1928 + RANUEContextModification ::= SEQUENCE

1929 + {

1930 + aMFUENGAPID [1] AMFUENGAPID,

1931 + rANUENGAPID [2] RANUENGAPID,

1932 + rATFrequencySelectionPriority [3] RATFrequencySelectionPriority OPTIONAL,

1933 + newAMFUENGAPID [4] AMFUENGAPID OPTIONAL,

1934 + newGUAMI [5] GUAMI OPTIONAL,

1935 + iABAuthorizedIndicator [6] IABAuthorizedIndicator OPTIONAL,

1936 + nRV2XServicesAuthorization [7] NRV2XServicesAuthorization OPTIONAL,

1937 + lTEV2XServiceAuthorization [8] LTEV2XServiceAuthorization OPTIONAL,

1938 + rGLevelWirelineAccessCharacteristics [9] OCTET STRING OPTIONAL,

1939 + uERadioCapabilityID [10] OCTET STRING OPTIONAL,

1940 + fiveGProSeAuthorizationIndication [11] FiveGProSeAuthorizationIndication OPTIONAL,

1941 + mobileIABAuthorizedIndicator [12] MobileIABAuthorizedIndicator OPTIONAL

1942 + }

1943 +

1944 + RANDownlinkNASTransport ::= SEQUENCE

1945 + {

1946 + aMFUENGAPID [1] AMFUENGAPID,

1947 + rANUENGAPID [2] RANUENGAPID,

1948 + oldAMF [3] GUAMI OPTIONAL,

1949 + allowedNSSAI [4] AllowedNSSAI OPTIONAL,

1950 + mobilityRestrictionList [5] MobilityRestrictionList OPTIONAL,

1951 + rATFrequencySelectionPriority [6] RATFrequencySelectionPriority OPTIONAL,

1952 + uEDifferentiationInfo [7] UEDifferentiationInfo OPTIONAL,

1953 + uERadioCapability [8] UERadioCapability OPTIONAL,

1954 + uERadioCapabilityID [9] OCTET STRING OPTIONAL,

1955 + targetNSSAIInfo [10] TargetNSSAIInfo OPTIONAL,

1956 + mobileIABAuthorizedIndicator [11] MobileIABAuthorizedIndicator OPTIONAL

1957 + }

1958 +

1959 + UEDifferentiationInfo ::= SEQUENCE

1960 + {

1961 + periodicCommunicationIndicator [1] PeriodicCommunicationIndicator OPTIONAL,

1962 + periodicTime [2] INTEGER OPTIONAL,

1963 + scheduledCommunicationTime [3] SBIType OPTIONAL,

1964 + stationaryIndication [4] SBIType OPTIONAL,

1965 + trafficProfile [5] SBIType OPTIONAL,

1966 + batteryIndication [6] SBIType OPTIONAL

1967 + }

1968 +

1969 + MobileIABAuthorizedIndicator ::= ENUMERATED

1970 + {

1971 + authorized(1),

1972 + notAuthorized(2)

1973 + }

1974 +

1920 1975 -- ==================

1921 1976 -- 5G SMF definitions

1922 1977 -- ==================

@@ -6243,6 +6298,12 @@ NSSAI ::= SEQUENCE OF SNSSAI

6243 6298

6244 6299 PagingRestrictionIndicator ::= OCTET STRING (SIZE(1..33))

6245 6300

6301 + PeriodicCommunicationIndicator ::= ENUMERATED

6302 + {

6303 + periodic(1),

6304 + nonPeriodic(2)

6305 + }

6306 +

6246 6307 PLMNID ::= SEQUENCE

6247 6308 {

6248 6309 mCC [1] MCC,

END OF CHANGE 1

END OF ANNEX (ASN.1)

END OF LAST CHANGE