**3GPP TSG-RAN WG3 Meeting #114bis-e *R3-22xxxx***

**Online, 17 – 26 January 2022**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.413** | **CR** | **0666** | **rev** | **1** | **Current version:** | **16.8.0** |  |
|  |
| *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 | **X** | Core Network | **X** |

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|  |
| ***Title:***  | NGAP rapporteur corrections |
|  |  |
| ***Source to WG:*** | Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** |  TEI17 |  | ***Date:*** | 2021-10-21 |
|  |  |  |  |  |
| ***Category:*** | D |  | ***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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Minor errors in the specification. |
|  |  |
| ***Summary of change:*** | 1. 8.2.3.4: fix italics and grammar.
2. 9.2.2.13: fix IE reference for *Message Type* and *RAN UE NGAP ID* IEs.
3. 9.3.1.10: add “in UL” to the semantics description of the *Guaranteed Flow Bit Rate Uplink* IE
4. 9.3.1.111: add specification number to reference [18], and correct spelling of *ResumeCause*.
5. 9.3.3.41: fix italics (4 instances)
6. 9.4.6: correct the spelling of *unsuccessful*.
7. 8.6.2.2: correct the reference number for TS 38.300
8. 9.2.14.1: fix IE reference for *Message Type* IE
9. 9.3.1.74: remove section number of TS 36.331 in semantics description
10. 9.3.1.141: remove section number of TS 36.331 in semantics descriptions
11. 9.3.1.142: add missing “TS”

Added in rev1:1. 9.2.6.2: Change presence of *Extended Slice Support List* IE from “M” to “O” (to align with asn.1)
2. 9.3.1.5: add criticality columns (to align with asn.1)
3. 9.3.1.90: Add units in semantics description (to align with other DRX-related IEs in NGAP, and with *Paging DRX* IE in F1AP)
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|  |  |
| ***Consequences if not approved:*** | Errors remain in the specification.  |
|  |  |
| ***Clauses affected:*** | 8.2.3.4, 8.6.2.2, 9.2.2.13, 9.2.6.2, 9.2.14.1, 9.3.1.5, 9.3.1.10, 9.3.1.74, 9.3.1.90, 9.3.1.111, 9.3.1.141, 9.3.1.142, 9.3.3.41, 9.4.6 |
|  |  |
|  | **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 Modification*

#### 8.2.3.4 Abnormal Conditions

If the NG-RAN node receives a PDU SESSION RESOURCE MODIFY REQUEST message containing several *PDU Session ID* IEs (in the *PDU Session Resource Modify Request List* IE) set to the same value, the NG-RAN node shall report the modification of the corresponding PDU sessions as failed in the PDU SESSION RESOURCE MODIFY RESPONSE message with an appropriate cause value.

If the NG-RAN node receives a PDU SESSION RESOURCE MODIFY REQUEST message containing some *PDU Session ID* IEs (in the *PDU Session Resource Modify Request List* IE) that the NG-RAN node does not recognize, the NG-RAN node shall report the corresponding invalid PDU sessions as failed in the PDU SESSION RESOURCE MODIFY RESPONSE message with an appropriate cause value.

If the NG-RAN node receives a PDU SESSION RESOURCE MODIFY REQUEST message containing a *QoS Flow Level QoS Parameters* IE in the *PDU Session Resource Modify Request Transfer* IE for a GBR QoS flow but the *GBR QoS Flow Information* IE is not present, the NG-RAN node shall report the addition or modification of the corresponding QoS flow as failed in the *PDU Session Resource Modify Response Transfer* IE of the PDU SESSION RESOURCE MODIFY RESPONSE message with an appropriate cause value.

If the NG-RAN node receives a PDU SESSION RESOURCE MODIFY REQUEST message containing the *Delay Critical* IE in the *Dynamic 5QI Descriptor* IE of the *QoS Flow Level QoS Parameters* IE of the *PDU Session Resource Modify Request Transfer* IE set to the value “delay critical” but the *Maximum Data Burst Volume* IE is not present, the NG-RAN node shall report the addition or modification of the corresponding QoS flow as failed in the *PDU Session Resource Modify Response Transfer* IE of the PDU SESSION RESOURCE MODIFY RESPONSE message with an appropriate cause value.

If the NG-RAN node receives a PDU SESSION RESOURCE MODIFY REQUEST message containing a PDU session in the *PDU Session Resource Modify Request List* IE with the same QoS flow included both in the *QoS Flow Add or Modify Request List* IE and the *QoS Flow to Release List* IE, the NG-RAN node shall report the corresponding QoS flow as failed in the *QoS Flow Failed to Add or Modify List* IE in the *PDU Session Resource Modify Response Transfer* IE of the PDU SESSION RESOURCE MODIFY RESPONSE message with an appropriate cause value if the PDU session is modified successfully. The NG-RAN node shall not release the QoS flow when the corresponding QoS flow already exists.

*Next Modification*

#### 8.6.2.2 Successful Operation

\*\*\* unchanged text skipped \*\*\*

If the *UE Radio Capability* IE is included in the DOWNLINK NAS TRANSPORT message, the NG-RAN node shall store this information in the UE context, and use it as defined in TS 38.300 [8].

*Next Modification*

#### 9.2.2.13 RAN CP RELOCATION INDICATION

This message is sent by the NG-RAN node to initiate the establishment of a UE-associated logical NG-connection, following the reception of re-establishment request.

Direction: NG-RAN node → AMF.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | reject |
| 5G-S-TMSI | M |  | 9.3.3.20 |  | YES | reject |
| E-UTRA CGI | M |  | 9.3.1.9 |  | YES | ignore |
| TAI | M |  | 9.3.3.11 |  | YES | ignore |
| UL CP Security Information | M |  | 9.3.3.48 |  | YES | reject |

*Next Modification*

#### 9.2.6.2 NG SETUP RESPONSE

This message is sent by the AMF to transfer application layer information for an NG-C interface instance.

Direction: AMF → NG-RAN node

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| AMF Name | M |  | 9.3.3.21  |  | YES | reject |
| **Served GUAMI List** |  | *1* |  |  | YES | reject |
| >**Served GUAMI Item** |  | *1..<maxnoofServedGUAMIs>* |  |  | - |  |
| >>GUAMI | M |  | 9.3.3.3 |  | - |  |
| >>Backup AMF Name | O |  | AMF Name9.3.3.21 |  | - |  |
| >>GUAMI Type | O |  | ENUMERATED (native, mapped, …) |  | YES | ignore |
| Relative AMF Capacity | M |  | 9.3.1.32 |  | YES | ignore |
| **PLMN Support List** |  | *1* |  |  | YES | reject |
| **>PLMN Support Item** |  | *1..<maxnoofPLMNs>* |  |  | - |  |
| >>PLMN Identity | M |  | 9.3.3.5 |  | - |  |
| >>Slice Support List | M |  | 9.3.1.17 | Supported S-NSSAIs per PLMN or per SNPN. | - |  |
| >>NPN Support | O |  | 9.3.3.44 | If *NID* IE is included, it identifies a SNPN together with the *PLMN Identity* IE. | YES | reject |
| >>Extended Slice Support List | O |  | 9.3.1.191 | Additional Supported S-NSSAIs per PLMN or per SNPN. | YES | reject |
| Criticality Diagnostics | O |  | 9.3.1.3 |  | YES | ignore |
| UE Retention Information | O |  | 9.3.1.117 |  | YES | ignore |
| IAB Supported | O |  | ENUMERATED (true, ...) | Indication of support for IAB. | YES | ignore |
| Extended AMF Name | O |  | 9.3.3.51 |  | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofServedGUAMIs | Maximum no. of GUAMIs served by an AMF. Value is 256. |
| maxnoofPLMNs | Maximum no. of PLMNs per message. Value is 12. |

*Next Modification*

#### 9.2.14.1 SECONDARY RAT DATA USAGE REPORT

This message is sent by the NG-RAN node to report Secondary RAT data usage.

Direction: NG-RAN → AMF

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.3.1.1 |  | YES | ignore |
| AMF UE NGAP ID | M |  | 9.3.3.1 |  | YES | ignore |
| RAN UE NGAP ID | M |  | 9.3.3.2 |  | YES | ignore |
| **PDU Session Resource Secondary RAT Usage List** |  | *1* |  |  | YES | ignore |
| **>PDU Session Resource Secondary RAT Usage Item** |  | *1..<maxnoofPDUSessions>* |  |  | - |  |
| >>PDU Session ID | M |  | 9.3.1.50 |  | - |  |
| >>Secondary RAT Data Usage Report Transfer | M |  | OCTET STRING | Containing the *Secondary RAT Data Usage Report Transfer* IE specified in subclause 9.3.4.23 | - |  |
| Handover Flag | O |  | ENUMERATED (handover\_preparation, …)  |  | YES | ignore |
| User Location Information | O |  | 9.3.1.16 |  | YES | ignore |

*Next Modification*

#### 9.3.1.5 Global RAN Node ID

This IE is used to globally identify an NG-RAN node (see TS 38.300 [8]).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| CHOICE *NG-RAN node* | M |  |  |  | - |  |
| *>gNB* |  |  |  |  |  |  |
| >>Global gNB ID | M |  | 9.3.1.6 |  | - |  |
| >*ng-eNB* |  |  |  |  |  |  |
| >>Global ng-eNB ID | M |  | 9.3.1.8 |  | - |  |
| >*N3IWF* |  |  |  |  |  |  |
| >>Global N3IWF ID | M |  | 9.3.1.57 |  | - |  |
| >*TNGF* |  |  |  |  | YES | reject |
| >>Global TNGF ID | M |  | 9.3.1.161 |  | - |  |
| >*TWIF* |  |  |  |  | YES | reject |
| >>Global TWIF ID | M |  | 9.3.1.163 |  | - |  |
| >*W-AGF* |  |  |  |  | YES | reject |
| >>Global W-AGF ID | M |  | 9.3.1.162 |  | - |  |

*Next Modification*

#### 9.3.1.10 GBR QoS Flow Information

This IE indicates QoS parameters for a GBR QoS flow for downlink and uplink.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Maximum Flow Bit Rate Downlink | M |  | Bit Rate9.3.1.4 | Maximum Bit Rate in DL. Details in TS 23.501 [9]. | - |  |
| Maximum Flow Bit Rate Uplink | M |  | Bit Rate9.3.1.4 | Maximum Bit Rate in UL. Details in TS 23.501 [9]. | - |  |
| Guaranteed Flow Bit Rate Downlink | M |  | Bit Rate9.3.1.4 | Guaranteed Bit Rate (provided there is data to deliver) in DL. Details in TS 23.501 [9]. | - |  |
| Guaranteed Flow Bit Rate Uplink | M |  | Bit Rate9.3.1.4 | Guaranteed Bit Rate (provided there is data to deliver) in UL. Details in TS 23.501 [9]. | - |  |
| Notification Control | O |  | ENUMERATED (notification requested, ...)  | Details in TS 23.501 [9]. | - |  |
| Maximum Packet Loss Rate Downlink | O |  | Packet Loss Rate9.3.1.79 | Indicates the maximum rate for lost packets that can be tolerated in the downlink direction. Details in TS 23.501 [9]. | - |  |
| Maximum Packet Loss Rate Uplink | O |  | Packet Loss Rate9.3.1.79 | Indicates the maximum rate for lost packets that can be tolerated in the uplink direction. Details in TS 23.501 [9]. | - |  |
| Alternative QoS Parameters Set List | O |  | 9.3.1.151 | Indicates alternative sets of QoS parameters for the QoS flow. | YES | ignore |

*Next Modification*

#### 9.3.1.74 UE Radio Capability

This IE contains UE Radio Capability information.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| UE Radio Capability | M |  | OCTET STRING | Includes either the RRC *UERadioAccessCapabilityInformation* message as defined in TS 38.331 [18], or the *UERadioAccessCapabilityInformation-NB* message as defined in TS 36.331 [21]. |

*Next Modification*

#### 9.3.1.90 Paging DRX

This IE indicates the Paging DRX as defined in TS 38.304 [12] and TS 36.304 [29].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| Paging DRX | M |  | ENUMERATED (32, 64, 128, 256, …) | Unit: [number of radioframes] |

*Next Modification*

#### 9.3.1.111 RRC Establishment Cause

This IE indicates the reason for RRC Connection Establishment as received from the UE in the *EstablishmentCause* defined in TS 38.331 [18] and TS 36.331 [21], or the reason for RRC Connection Resume as received from the UE in the *ResumeCause* defined in TS 38.331 [18] and TS 36.331 [21], or the reason for RRC Connection Establishment as received from the UE in the *EstablishmentCause-NB* defined in TS 36.331 [21].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| RRC Establishment Cause | M |  | ENUMERATED (emergency,highPriorityAccess,mt-Access,mo-Signalling,mo-Data,mo-VoiceCall,mo-VideoCall,mo-SMS,mps-PriorityAccess,mcs-PriorityAccess,…,notAvailable, mo-ExceptionData) | The *notAvailable* value is used in case the UE is re-establishing an RRC connection but there is fallback to RRC connection establishment as described in TS 38.331 [18], or the *ResumeCause* received from the UE does not map to any other value of the *RRC Establishment Cause* IE. |

*Next Modification*

#### 9.3.1.141 Paging Assistance Data for CE Capable UE

This IE provides Assistance Data for paging CE capable UE.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| Global Cell ID | M |  | E-UTRA CGI 9.3.1.9 |  |
| Coverage Enhancement Level | M |  | OCTET STRING | Includes either the *UEPagingCoverageInformation* message as defined in TS 36.331 [21], or the *UEPagingCoverageInformation-NB* message as defined in TS 36.331 [21]. |

#### 9.3.1.142 UE Radio Capability ID

This IE contains the UE Radio Capability ID.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| UE Radio Capability ID | M |  | OCTET STRING | Defined in TS 23.003 [23]. |

*Next Modification*

#### 9.3.3.41 UE RLF Report Container

This IE contains the RLF Report to be transferred.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| CHOICE *RLF type* | M |  |  |  |
| >*NR* |  |  |  |  |
| >>NR UE RLF Report Container | M |  | OCTET STRING | *nr-RLF-Report-r16* IE contained in the *UEInformationResponse* message defined in TS 38.331 [18]. |
| >*LTE* |  |  |  |  |
| >>LTE UE RLF Report Container | M |  | OCTET STRING | *RLF-Report-r9* IE contained in the *UEInformationResponse* message defined in TS 36.331 [21] |

*Next Modification*

### 9.4.6 Common Definitions

-- ASN1START

-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

--

-- Common definitions

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-- \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*\*\* unchanged text skipped \*\*\*

TriggeringMessage ::= ENUMERATED { initiating-message, successful-outcome, unsuccessful-outcome }

END

-- ASN1STOP

*End of Changes*