**3GPP TSG-RAN WG3 Meeting #107-eR3-201375**

**Online, February 24th – March 6th 2020**

Agenda Item: 13.2.1.2

Source: Ericsson

Title: (TP for NR-IAB BL CR for TS 38.473): FFS Cleanup

Document for: Agreement

# Annex: TP for NR-IAB BL CR for TS 38.473

-------------------------------------------Change 1-------------------------------------------

### 9.2.2 UE Context Management messages

#### 9.2.2.1 UE CONTEXT SETUP REQUEST

This message is sent by the gNB-CU to request the setup of a UE context.

Direction: gNB-CU → gNB-DU.

| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| gNB-CU UE F1AP ID | M  |  | 9.3.1.4 |  | YES | reject |
| gNB-DU UE F1AP ID  | O |  | 9.3.1.5 |  | YES | ignore |
| SpCell ID | M |  | NR CGI9.3.1.12 | Special Cell as defined in TS 38.321 [16]. For handover case, this IE is considered as target cell. | YES | reject |
| ServCellIndex | M |  | INTEGER (0..31,...) |  | YES | reject |
| SpCell UL Configured | O |  | Cell UL Configured9.3.1.33 |  | YES | ignore |
| CU to DU RRC Information | M |  | 9.3.1.25 |  | YES | reject |
| **Candidate SpCell List** |  | *0..1* |  |  | YES | ignore |
| **>Candidate SpCell Item IEs** |  | *1 .. <maxnoofCandidateSpCells>* |  |  | EACH | ignore |
| >>Candidate SpCell ID | M |  | NR CGI9.3.1.12 | Special Cell as defined in TS 38.321 [16] | - |  |
| DRX Cycle  | O |  | DRX Cycle 9.3.1.24 |  | YES | ignore |
| Resource Coordination Transfer Container | O |  | OCTET STRING | Includes the *MeNB Resource Coordination Information* IE as defined in subclause 9.2.116 of TS 36.423 [9] for EN-DC case or *MR-DC Resource Coordination Information* IE as defined in TS 38.423 [28] for NGEN-DC and NE-DC cases. | YES | ignore |
| **SCell To Be Setup List** |  | *0..1* |  |  | YES | ignore |
| **>SCell to Be Setup Item IEs** |  | *1.. <maxnoofSCells>* |  |  | EACH | ignore |
| >>SCell ID | M |  | NR CGI9.3.1.12 | SCell Identifier in gNB | - |  |
| >>SCellIndex | M |  | INTEGER (1..31) |  | - |  |
| >>SCell UL Configured | O |  | Cell UL Configured9.3.1.33 |  | - |  |
| >>servingCellMO | O |  | INTEGER (1..64) |  | YES | ignore |
| **SRB to Be Setup List** |  | *0..1* |  |  | YES | reject |
| **>SRB to Be Setup Item IEs** |  | *1 .. <maxnoofSRBs>* |  |  | EACH | reject |
| >>SRB ID | M |  | 9.3.1.7 |  | - |  |
| >>Duplication Indication | O |  | ENUMERATED (true, ..., false) | If included, it should be set to true. | - |  |
| **DRB to Be Setup List** |  | *0..1* |  |  | YES | reject |
| **>DRB to Be Setup Item IEs** |  | *1 .. <maxnoofDRBs>*  |  |  | EACH | reject |
| >>DRB ID | M |  | 9.3.1.8 |  | - |  |
| >>CHOICE QoS Information | M |  |  |  | - |  |
| >>>E-UTRAN QoS | M |  | 9.3.1.19 | Shall be used for EN-DC case to convey E-RAB Level QoS Parameters | - |  |
| **>>>DRB Information** |  | *1* |  | Shall be used for NG-RAN cases | YES | ignore |
| >>>>DRB QoS | M |  | 9.3.1.45 |  | - |  |
| >>>>S-NSSAI | M |  | 9.3.1.38 |  | - |  |
| >>>>Notification Control | O |  | 9.3.1.56 |  | - |  |
| **>>>>Flows Mapped to DRB Item** |  | *1 .. <maxnoofQoSFlows>* |  |  | - |  |
| >>>>>QoS Flow Identifier | M |  | 9.3.1.63 |  | - |  |
| >>>>>QoS Flow Level QoS Parameters | M |  | 9.3.1.45 |  | - |  |
| >>>>>QoS Flow Mapping Indication | O |  | 9.3.1.72 |  | YES | ignore |
| **>>UL UP TNL Information to be setup List** |  | *1* |  |  | - |  |
| **>>> UL UP TNL Information to Be Setup Item IEs** |  | *1 .. <maxnoofULUPTNLInformation>* |  |  | - |  |
| >>>>UL UP TNL Information | M |  | UP Transport Layer Information9.3.2.1 | gNB-CU endpoint of the F1 transport bearer. For delivery of UL PDUs. | - |  |
| >>>>UL BH Information | O |  | 9.3.1.y |  | - |  |
| >> RLC Mode | M |  | 9.3.1.27 |  | - |  |
| >> UL Configuration | O |  | UL Configuraiton 9.3.1.31 | Information about UL usage in gNB-DU.  | - |  |
| >>Duplication Activation | O |  | 9.3.1.36 | Information on the initial state of CA based UL PDCP duplication  | - |  |
| >> DC Based Duplication Configured | O |  | ENUMERATED (true, ..., false) | Indication on whether DC based PDCP duplication is configured or not. If included, it should be set to true. | YES | reject |
| >>DC Based Duplication Activation | O |  | Duplication Activation9.3.1.36 | Information on the initial state of DC basedUL PDCP duplication | YES | reject |
| >>DL PDCP SN length | M |  | ENUMERATED (12bits, 18bits, ...) |  | YES | ignore |
| >>UL PDCP SN length | O |  | ENUMERATED (12bits, 18bits, ...) |  | YES | ignore |
| Inactivity Monitoring Request  | O |  | ENUMERATED (true, ...) |  | YES | reject |
| RAT-Frequency Priority Information | O |  | 9.3.1.34 |  | YES | reject |
| RRC-Container | O |  | 9.3.1.6 | Includes the *DL-DCCH-Message* IE as defined in subclause 6.2 of TS 38.331 [8], encapsulated in a PDCP PDU. | YES | ignore |
| Masked IMEISV | O |  | 9.3.1.55 |  | YES | ignore |
| Serving PLMN | O |  | PLMN ID9.3.1.14 | Indicates the PLMN serving the UE. | YES | ignore |
| gNB-DU UE Aggregate Maximum Bit Rate Uplink | C-ifDRBSetup |  | Bit Rate 9.3.1.22 | The gNB-DU UE Aggregate Maximum Bit Rate Uplink is to be enforced by the gNB-DU. | YES | ignore |
| RRC Delivery Status Request | O |  | ENUMERATED (true, …) | Indicates whether RRC DELIVERY REPORT procedure is requested for the RRC message. | YES | ignore |
| Resource Coordination Transfer Information | O |  | 9.3.1.73 |  | YES | ignore |
| servingCellMO | O |  | INTEGER (1..64, ...) |  | YES | ignore |
| New gNB-CU UE F1AP ID | O |  | gNB-CU UE F1AP ID9.3.1.4 |  | YES | reject |
| RAN UE ID | O |  | OCTET STRING (SIZE (8)) |  | YES | ignore |
| Trace Activation | O |  | 9.3.1.88 |  | YES | ignore |
| Additional RRM Policy Index | O |  | 9.3.1.90 |  | YES | ignore |
| **BH RLC Channel to be Setup List** |  | *0..1* |  |  | YES | reject |
| **>BH RLC Channel to be Setup Item IEs** |  | *1 .. <maxnoofBHRLCChannels>*  |  |  | EACH | reject |
| >>BH RLC CH ID | M |  | 9.3.1.x |  | - |  |
| >>CHOICE *BH QoS Information* | M |  |  |  |  |  |
| >>>BH RLC CH QoS | M |  | 9.3.1.45 | Shall be used for SA case. |  |  |
| >>>E-UTRAN BH RLC CH QoS | M |  | 9.3.1.19 | Shall be used for EN-DC case. |  |  |
| >>>Control Plane Traffic Type | M |  | 9.3.1.z |  |  |  |
| >>RLC Mode | M |  | 9.3.1.27 |  | - |  |
| Child BAP Address | O |  | BIT STRING (SIZE(10)) | Coded as defined in subclause x.y of TS 38.331 [8]. | YES | reject |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofSCells | Maximum no. of SCells allowed towards one UE, the maximum value is 32. |
| maxnoofSRBs | Maximum no. of SRB allowed towards one UE, the maximum value is 8.  |
| maxnoofDRBs | Maximum no. of DRB allowed towards one UE, the maximum value is 64.  |
| maxnoofULUPTNLInformation | Maximum no. of ULUP TNL Information allowed towards one DRB, the maximum value is 2. |
| maxnoofCandidateSpCells | Maximum no. of SpCells allowed towards one UE, the maximum value is 64. |
| maxnoofQoSFlows | Maximum no. of flows allowed to be mapped to one DRB, the maximum value is 64. |
| *maxnoofBHRLCChannels* | Maximum no. of BH RLC Channels allowed towards one IAB-node, the maximum value is 16384. |

|  |  |
| --- | --- |
| Condition | Explanation |
| ifDRBSetup | This IE shall be present only if the *DRB to Be Setup List* IE is present. |

-------------------------------------------Change 2-------------------------------------------

### 9.2.x BH Routing Configuration messages

#### 9.2.x.1 BH ROUTING CONFIGURATION

This message is sent by the gNB-CU to provide the BH routing information to the gNB-DU.

Direction: gNB-CU → gNB-DU

| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| --- | --- | --- | --- | --- | --- | --- |
| Message Type | M |  | 9.3.1.1 |  | YES | reject |
| Transaction ID | M |  | 9.3.1.23 |  | YES | reject |
| **BH Routing Information Added List** |  | *0...1* |  |  | YES | ignore |
| **>BH Routing** **Information Added List** **Item** |  | *1.. <maxnoofRoutingEntries>* |  |  | EACH | ignore |
| >>BAP Routing ID | M |  | BIT STRING (SIZE(20)) | Coded as defined in subclause x.z of TS 38.331 [8]. | - |  |
| >>Next Hop BAPAddress | M |  | BIT STRING (SIZE(10)) | Indicates the BAP address of the next hop IAB-node or IAB-donor-DU. Coded as defined in subclause x.y of TS 38.331 [8]. | - |  |
| **BH Routing Information Removed List** |  | *0...1* |  |  | YES | ignore |
| **>BH Routing** **Information Removed****List Item** |  | *1.. <maxnoofRoutingEntries>* |  |  | EACH | ignore |
| >>BAP Routing ID | M |  | BIT STRING (SIZE(20)) | Coded as defined in subclause x.z of TS 38.331 [8]. | - |  |

|  |  |
| --- | --- |
| Range bound | Explanation |
| *maxnoofRoutingEntries* | Maximum no. of routing entries, the maximum value is 1024. |

-------------------------------------------Change 2-------------------------------------------

### 9.4.5 Information Element Definitions

-- ASN1START

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

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-- Information Element Definitions

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

**>>>>>>>>>>>>>>> Unchanged parts are skipped<<<<<<<<<<<<<<<<**

-- B

BAPAddress ::= BIT STRING (SIZE(10))

BitRate ::= INTEGER (0..4000000000000,...)

BearerTypeChange ::= ENUMERATED {true, ...}

BHChannelID ::= FFS

**>>>>>>>>>>>>>>> Unchanged parts are skipped<<<<<<<<<<<<<<<<**

-- E

Endpoint-IP-address-and-port ::=SEQUENCE {

 endpointIPAddress TransportLayerAddress,

 iE-Extensions ProtocolExtensionContainer { { Endpoint-IP-address-and-port-ExtIEs} } OPTIONAL

}

Endpoint-IP-address-and-port-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 { ID id-portNumber CRITICALITY reject EXTENSION PortNumber PRESENCE optional},

 ...

}

ExtendedAvailablePLMN-List ::= SEQUENCE (SIZE(1..maxnoofExtendedBPLMNs)) OF ExtendedAvailablePLMN-Item

ExtendedAvailablePLMN-Item ::= SEQUENCE {

 pLMNIdentity PLMN-Identity,

 iE-Extensions ProtocolExtensionContainer { { ExtendedAvailablePLMN-Item-ExtIEs} } OPTIONAL

}

ExtendedAvailablePLMN-Item-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

ExtendedLCID ::= INTEGER (33..65568)

**>>>>>>>>>>>>>>> Unchanged parts are skipped<<<<<<<<<<<<<<<<**

-------------------------------------------Change 4-------------------------------------------

### 9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

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

F1AP-Constants {

itu-t (0) identified-organization (4) etsi (0) mobileDomain (0)

ngran-access (22) modules (3) f1ap (3) version1 (1) f1ap-Constants (4) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

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

--

-- IE parameter types from other modules.

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

IMPORTS

 ProcedureCode,

 ProtocolIE-ID

FROM F1AP-CommonDataTypes;

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

--

-- Elementary Procedures

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

id-Reset ProcedureCode ::= 0

id-F1Setup ProcedureCode ::= 1

id-ErrorIndication ProcedureCode ::= 2

id-gNBDUConfigurationUpdate ProcedureCode ::= 3

id-gNBCUConfigurationUpdate ProcedureCode ::= 4

id-UEContextSetup ProcedureCode ::= 5

id-UEContextRelease ProcedureCode ::= 6

id-UEContextModification ProcedureCode ::= 7

id-UEContextModificationRequired ProcedureCode ::= 8

id-UEMobilityCommand ProcedureCode ::= 9

id-UEContextReleaseRequest ProcedureCode ::= 10

id-InitialULRRCMessageTransfer ProcedureCode ::= 11

id-DLRRCMessageTransfer ProcedureCode ::= 12

id-ULRRCMessageTransfer ProcedureCode ::= 13

id-privateMessage ProcedureCode ::= 14

id-UEInactivityNotification ProcedureCode ::= 15

id-GNBDUResourceCoordination ProcedureCode ::= 16

id-SystemInformationDeliveryCommand ProcedureCode ::= 17

id-Paging ProcedureCode ::= 18

id-Notify ProcedureCode ::= 19

id-WriteReplaceWarning ProcedureCode ::= 20

id-PWSCancel ProcedureCode ::= 21

id-PWSRestartIndication ProcedureCode ::= 22

id-PWSFailureIndication ProcedureCode ::= 23

id-GNBDUStatusIndication ProcedureCode ::= 24

id-RRCDeliveryReport ProcedureCode ::= 25

id-F1Removal ProcedureCode ::= 26

id-NetworkAccessRateReduction ProcedureCode ::= 27

id-TraceStart ProcedureCode ::= 28

id-DeactivateTrace ProcedureCode ::= 29

id-DUCURadioInformationTransfer ProcedureCode ::= 30

id-CUDURadioInformationTransfer ProcedureCode ::= 31

id-BHRoutingConfiguration ProcedureCode ::= xx

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

--

-- Extension constants

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

maxPrivateIEs INTEGER ::= 65535

maxProtocolExtensions INTEGER ::= 65535

maxProtocolIEs INTEGER ::= 65535

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

--

-- Lists

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

maxNRARFCN INTEGER ::= 3279165

maxnoofErrors INTEGER ::= 256

maxnoofIndividualF1ConnectionsToReset INTEGER ::= 65536

maxCellingNBDU INTEGER ::= 512

maxnoofSCells INTEGER ::= 32

maxnoofSRBs INTEGER ::= 8

maxnoofDRBs INTEGER ::= 64

maxnoofULUPTNLInformation INTEGER ::= 2

maxnoofDLUPTNLInformation INTEGER ::= 2

maxnoofBPLMNs INTEGER ::= 6

maxnoofCandidateSpCells INTEGER ::= 64

maxnoofPotentialSpCells INTEGER ::= 64

maxnoofNrCellBands INTEGER ::= 32

maxnoofSIBTypes INTEGER ::= 32

maxnoofSITypes INTEGER ::= 32

maxnoofPagingCells INTEGER ::= 512

maxnoofTNLAssociations INTEGER ::= 32

maxnoofQoSFlows INTEGER ::= 64

maxnoofSliceItems INTEGER ::= 1024

maxCellineNB INTEGER ::= 256

maxnoofExtendedBPLMNs INTEGER ::= 6

maxnoofUEIDs INTEGER ::= 65536

maxnoofBPLMNsNRminus1 INTEGER ::= 11

maxnoofUACPLMNs INTEGER ::= 12

maxnoofUACperPLMN INTEGER ::= 64

maxnoofAdditionalSIBs INTEGER ::= 63

maxnoofslots INTEGER ::= 320

maxnoofTLAs INTEGER ::= 16

maxnoofGTPTLAs INTEGER ::= 16

maxnoofBHRLCChannels INTEGER ::= 16384

maxnoofRoutingEntries INTEGER ::= 1024

-------------------------------------------End of changes ------------------------------------------