**3GPP TSG-RAN WG2 Meeting # 113bis-e *R2-210xxxx***

 **Electronic Meeting, 12th – 20th April, 2021**

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| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **36.331** | **CR** | **4631** | **rev** | **1** | **Current version:** | **16.4.0** |  |
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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 | **x** | Core Network |  |

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| ***Title:***  | Miscellaneous corrections on TS 36.331 (Rapporteur CR) |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | 5G\_V2X\_NRSL-Core |  | ***Date:*** | 2021-04-01 |
|  |  |  |  |  |
| ***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 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:*** | 1. During RAN2#113-e meeting, it was agreed in R2-2102411 to clarify TS 38.331 that DAPS HO is not configured when UE is configured with sidelink. Similar change should be applied to 36.331 even though w/o the need of re-discussing the issue.
2. Some editorials still exit.
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| ***Summary of change:*** | 1. In the field description for *daps-HO* in section 6.3.2, clarify the configuration is not allowed when sidelink is configured.
2. Fix the editorials.

**Impact analysis****Impacted 5G architecture options:** Standalone and Non-Standalone**Impacted functionality:**DAPS, LTE V2X, NR SLInter-operability: 1. If UE implements according to the CR and the network does not, the problem remains, i.e., the UE behavior is undefined when configured with DAPS and Sidelink at the same time.
2. If the network implements according to the CR and the UE does not, there is no inter-operability issue.
3. If one UE is implemented according to this CR while the other UE is not, there is no inter-operability issue.
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| ***Consequences if not approved:*** | 1. In section 6.3.2, for *daps-HO*, no restriction on the co-configuration of DAPS and SL.
2. Some editorial errors still exist.
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| ***Clauses affected:*** | 5.3.3.1a, 5.3.5.3, 5.3.5.5, 6.3.2 |
|  |  |
|  | **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's revision history:*** |  |

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| START OF CHANGE |

5.3.3.1a Conditions for establishing RRC Connection for sidelink communication/ discovery/ V2X sidelink communication/ NR sidelink communication

For sidelink communication an RRC connection is initiated only in the following case:

1> if configured by upper layers to transmit non-relay related sidelink communication and related data is available for transmission:

2> if *SystemInformationBlockType18* is broadcast by the cell on which the UE camps; and if the valid version of *SystemInformationBlockType18* does not include *commTxPoolNormalCommon*;

1> if configured by upper layers to transmit relay related sidelink communication:

2> if the UE is acting as sidelink relay UE; and if *SystemInformationBlockType18* is broadcast by the cell on which the UE camps; or

2> if the UE has a selected sidelink relay UE; and if the sidelink remote UE threshold conditions as specified in 5.10.11.5 are met and if *SystemInformationBlockType18* is broadcast by the cell on which the UE camps; and if the valid version of *SystemInformationBlockType18* does not include *commTxPoolNormalCommon* or *commTxAllowRelayCommon*;

For V2X sidelink communication an RRC connection is initiated only in the following case:

1> if configured by upper layers to transmit non-P2X related V2X sidelink communication and related data is available for transmission:

2> if the frequency on which the UE is configured to transmit non-P2X related V2X sidelink communication concerns the camped frequency; and if *SystemInformationBlockType21* is broadcast by the cell on which the UE camps; and if the valid version of *SystemInformationBlockType21* includes *sl-V2X-ConfigCommon*; and *sl-V2X-ConfigCommon* does not include *v2x-CommTxPoolNormalCommon*; or

2> if the frequency on which the UE is configured to transmit non-P2X related V2X sidelink communication is included in *v2x-InterFreqInfoList* within *SystemInformationBlockType21* or *SystemInformationBlockType26* broadcast by the cell on which the UE camps; and if neither the valid version of *SystemInformationBlockType21* nor that of *SystemInformationBlockType26* includes *v2x-CommTxPoolNormal* for the concerned frequency;

1> if configured by upper layers to transmit P2X related V2X sidelink communication and related data is available for transmission:

2> if the frequency on which the UE is configured to transmit P2X related V2X sidelink communication concerns the camped frequency; and if *SystemInformationBlockType21* is broadcast by the cell on which the UE camps; and if the valid version of *SystemInformationBlockType21* includes *sl-V2X-ConfigCommon*; and *sl-V2X-ConfigCommon* does not include *p2x-CommTxPoolNormalCommon*; or

2> if the frequency on which the UE is configured to transmit P2X related V2X sidelink communication is included in *v2x-InterFreqInfoList* within *SystemInformationBlockType21* or *SystemInformationBlockType26* broadcast by the cell on which the UE camps; and if neither the valid version of *SystemInformationBlockType21* nor that of *SystemInformationBlockType26* includes *p2x-CommTxPoolNormal* for the concerned frequency;

For NR sidelink communication an RRC connection is initiated only when the conditions for NR sidelink communication specified in subclause 5.3.3.1a of TS 38.331 [82] are met;

NOTE 1: *SIB12* specified in subclause 5.3.3.1a of TS 38.331 is provided in *SystemInformationBlockType28.*

For sidelink discovery an RRC connection is initiated only in the following case:

1> if configured by upper layers to transmit non-PS related sidelink discovery announcements:

2> if the frequency on which the UE is configured to transmit non-PS related sidelink discovery announcements concerns the camped frequency; and *SystemInformationBlockType19* of the cell on which the UE camps does not include *discTxPoolCommon-r12*; or

2> if the frequency on which the UE is configured to transmit non-PS related sidelink discovery announcements is included in *discInterFreqList* in *SystemInformationBlockType19* broadcast by the cell on which the UE camps, with *discTxResourcesInterFreq* included within *discResourcesNonPS* and set to *requestDedicated*;

1> if configured by upper layers to transmit non-relay PS related sidelink discovery announcements:

2> if the frequency on which the UE is configured to transmit non-relay PS related sidelink discovery announcements concerns the camped frequency; and *SystemInformationBlockType19* of the cell on which the UE camps includes *discConfigPS* but does not include *discTxPoolPS-Common*; or

2> if the frequency on which the UE is configured to transmit non-relay PS related sidelink discovery announcements (e.g. group member discovery) is included in *discInterFreqList* in *SystemInformationBlockType19* broadcast by the cell on which the UE camps, with *discTxResourcesInterFreq* within *discResourcesPS* included and set to *requestDedicated*;

1> if configured by upper layers to transmit relay PS related sidelink discovery announcements:

2> if the UE is acting as sidelink relay UE; and if the sidelink relay UE threshold conditions as specified in 5.10.10.4 are met; or

2> if the UE is selecting a sidelink relay UE / has a selected sidelink relay UE; and if the sidelink remote UE threshold conditions as specified in 5.10.11.5 are met:

3> if the frequency on which the UE is configured to transmit relay PS related sidelink discovery announcements concerns the camped frequency; and *SystemInformationBlockType19* of the cell on which the UE camps includes *discConfigRelay* and *discConfigPS* but does not include *discTxPoolPS-Common*;

NOTE: Upper layers initiate an RRC connection. The interaction with NAS is left to UE implementation.

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| NEXT CHANGE |

5.3.5.3 Reception of an *RRCConnectionReconfiguration* not including the *mobilityControlInfo* by the UE

If the *RRCConnectionReconfiguration* message does not include the *mobilityControlInfo* and theUE is able to comply with the configuration included in this message, the UE shall:

1> if the received *RRCConnectionReconfiguration* includes the *daps-SourceRelease*:

2> reset source MCG MAC and release the source MCG MAC configuration;

2> for each DAPS bearer:

3> re-establish the RLC entity or entities for the source PCell;

3> release the RLC entity or entities and the associated DTCH logical channel for the source PCell;

3> reconfigure the PDCP entity to release DAPS, as specified in TS 36.323 [8];

2> for each SRB:

3> release the PDCP entity for the source PCell;

3> release the RLC entity and the associated DCCH logical channel for the source PCell;

2> release the physical channel configuration for the source PCell;

1> if this is the first *RRCConnectionReconfiguration* message after successful completion of the RRC connection re-establishment procedure:

2> re-establish PDCP for SRB2 configured with E-UTRA PDCP entity and for all DRBs that are established and configured with E-UTRA PDCP, if any;

2> re-establish RLC for SRB2 and for all DRBs that are established and configured with E-UTRA RLC, if any;

2> if the *RRCConnectionReconfiguration* message includes the *fullConfig*:

3> perform the radio configuration procedure as specified in 5.3.5.8;

2> if the *RRCConnectionReconfiguration* message includes the *radioResourceConfigDedicated*:

3> perform the radio resource configuration procedure as specified in 5.3.10;

NOTE 1: Void

NOTE 2: Void

1> else:

2> if the *RRCConnectionReconfiguration* message includes the *radioResourceConfigDedicated*:

3> perform the radio resource configuration procedure as specified in 5.3.10;

NOTE 3: If the *RRCConnectionReconfiguration* message includes the establishment of radio bearers other than SRB1, the UE may start using these radio bearers immediately, i.e. there is no need to wait for an outstanding acknowledgment of the *SecurityModeComplete* message.

1> if the received *RRCConnectionReconfiguration* includes the *sCellToReleaseList*:

2> perform SCell release as specified in 5.3.10.3a;

1> if the received *RRCConnectionReconfiguration* includes the *sCellToAddModList*:

2> perform SCell addition or modification as specified in 5.3.10.3b;

1> if the received *RRCConnectionReconfiguration* includes the *sCellGroupToReleaseList*:

2> perform SCell group release as specified in 5.3.10.3d;

1> if the received *RRCConnectionReconfiguration* includes the *sCellGroupToAddModList*:

2> perform SCell group addition or modification as specified in 5.3.10.3e;

1> if the received *RRCConnectionReconfiguration* includes the *scg-Configuration*; or

1> if the current UE configuration includes one or more split DRBs configured with *pdcp-Config* and the received *RRCConnectionReconfiguration* includes *radioResourceConfigDedicated* including *drb-ToAddModList*:

2> perform SCG reconfiguration as specified in 5.3.10.10;

1> if the received *RRCConnectionReconfiguration* includes the *nr-Config* and it is set to *release*: or

1> if the received *RRCConnectionReconfiguration* includes *endc-ReleaseAndAdd* and it is set to *TRUE*:

2> perform MR-DC release as specified in TS 38.331 [82], clause 5.3.5.10;

1> if the received *RRCConnectionReconfiguration* includes the *sk-Counter*:

2> perform key update procedure as specified in TS 38.331 [82], clause 5.3.5.7;

1> if the received *RRCConnectionReconfiguration* includes the *nr-SecondaryCellGroupConfig*:

2> perform NR RRC Reconfiguration as specified in TS 38.331 [82], clause 5.3.5.3;

1> if the received *RRCConnectionReconfiguration* includes the *nr-RadioBearerConfig1*:

2> perform radio bearer configuration as specified in TS 38.331 [82], clause 5.3.5.6;

1> if the received *RRCConnectionReconfiguration* includes the *nr-RadioBearerConfig2*:

2> perform radio bearer configuration as specified in TS 38.331 [82], clause 5.3.5.6;

1> if this is the first *RRCConnectionReconfiguration* message after successful completion of the RRC connection re-establishment procedure:

2> resume SRB2 and all DRBs that are suspended, if any, including RBs configured with NR PDCP;

NOTE 4: The handling of the radio bearers after the successful completion of the PDCP re-establishment, e.g. the re-transmission of unacknowledged PDCP SDUs (as well as the associated status reporting), the handling of the SN and the HFN, is specified in TS 36.323 [8].

NOTE 5: The UE may discard SRB2 messages and data that it receives prior to completing the reconfiguration used to resume these bearers.

1> if the received *RRCConnectionReconfiguration* includes the *systemInformationBlockType1Dedicated*:

2> perfom the actions upon reception of the *SystemInformationBlockType1* message as specified in 5.2.2.7*;*

1> if the received *RRCConnectionReconfiguration* includes the *systemInformationBlockType2Dedicated*:

2> perfom the actions upon reception of the *SystemInformationBlockType2* message as specified in 5.2.2.9;

1> if the *RRCConnectionReconfiguration* message includes the *dedicatedInfoNASList*:

2> forward each element of the *dedicatedInfoNASList* to upper layers in the same order as listed;

1> if the *RRCConnectionReconfiguration* message includes the *measConfig*:

2> perform the measurement configuration procedure as specified in 5.5.2;

1> perform the measurement identity autonomous removal as specified in 5.5.2.2a;

1> if the *RRCConnectionReconfiguration* message includes the *otherConfig*:

2> perform the other configuration procedure as specified in 5.3.10.9;

1> if the *RRCConnectionReconfiguration* message includes the *sl-DiscConfig* or *sl-CommConfig*:

2> perform the sidelink dedicated configuration procedure as specified in 5.3.10.15;

1> if the *RRCConnectionReconfiguration* message includes the *sl-V2X-ConfigDedicated*:

2> perform the V2X sidelink communication dedicated configuration procedure as specified in 5.3.10.15a;

NOTE 5a: If the *sl-V2X-ConfigDedicated* was received embedded within an NR *RRCReconfiguration* message, the UE does not build an E-UTRA *RRCConnectionReconfigurationComplete* message for the received *sl-V2X-ConfigDedicated*.

1> if the *RRCConnectionReconfiguration* message includes the *sl-ConfigDedicatedForNR*:

2> perform the related procedures for NR sidelink communication in accordance with TS 38.331 [82], clause 5.3.5.14 and clause 5.5.2;

1> if the *RRCConnectionReconfiguration* message includes *wlan-OffloadInfo*:

2> perform the dedicated WLAN offload configuration procedure as specified in 5.6.12.2;

1> if the *RRCConnectionReconfiguration* message includes *rclwi-Configuration*:

2> perform the WLAN traffic steering command procedure as specified in 5.6.16.2;

1> if the *RRCConnectionReconfiguration* message includes *lwa-Configuration*:

2> perform the LWA configuration procedure as specified in 5.6.14.2;

1> if the *RRCConnectionReconfiguration* message includes *lwip-Configuration*:

2> perform the LWIP reconfiguration procedure as specified in 5.6.17.2;

1> upon RRC connection establishment, if UE does not need UL gaps during continuous uplink transmission:

2> configure lower layers to stop using UL gaps during continuous uplink transmission in FDD for *RRCConnectionReconfigurationComplete* message and subsequent uplink transmission in RRC\_CONNECTED except for UL transmissions as specified in TS36.211 [21];

1> if the *RRCConnectionReconfiguration* message includes the *conditionalReconfiguration*:

2> perform conditional reconfiguration as specified in 5.3.5.9;

NOTE 6: In case of conditional reconfiguration the text "if the received *RRCConnectionReconfiguration. . .*" corresponds to applying the stored *RRCConnectionReconfiguration* message (according to 5.3.5.9.5).

1> set the content of *RRCConnectionReconfigurationComplete* message as follows:

2> if the *RRCConnectionReconfiguration* message includes *perCC-GapIndicationRequest*:

3> include *perCC-GapIndicationList* and *numFreqEffective*;

2> if the frequencies are configured for reduced measurement performance:

3> include *numFreqEffectiveReduced*;

2> if the received *RRCConnectionReconfiguration* message included *nr-SecondaryCellGroupConfig*:

3> include *scg-ConfigResponseNR* in accordance with TS 38.331 [82], clause 5.3.5.3;

1> if the UE is configured to operate in EN-DC as result of this procedure, forward *upperLayerIndication*, as if the UE receives this field from SIB2, to upper layers, otherwise indicate upper layers absence of this field;

1> if the UE is configured with NE-DC:

2> if the received *RRCConnectionReconfiguration* message was included in an NR *RRCResume* message:

3> transfer the *RRCConnectionReconfigurationComplete* message via SRB1 embedded in NR RRC message *RRCResumeComplete* as specified in TS 38.331 [82], clause 5.3.13.4;

2> else:

3> transfer the *RRCConnectionReconfigurationComplete* message via SRB1 embedded in NR RRC message *RRCReconfigurationComplete* as specified in TS 38.331 [82], clause 5.3.5.3;

1> else:

2> submit the *RRCConnectionReconfigurationComplete* message to lower layers for transmission using the new configuration, upon which the procedure ends;

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| NEXT CHANGE |

5.3.5.5 Reconfiguration failure

The UE shall:

1> if the UE is unable to comply with (part of) the configuration included in the *RRCConnectionReconfiguration* message or if the upper layers indicate that the *nas-Container* is invalid:

2> continue using the configuration used prior to the reception of *RRCConnectionReconfiguration* message;

2> if the UE is in NE-DC:

3> perform the actions as specified in TS 38.331 [82], clause 5.3.7;

2> else if security has not been activated:

3> perform the actions upon leaving RRC\_CONNECTED as specified in 5.3.12, with release cause other;

2> else:

3> initiate the connection re-establishment procedure as specified in 5.3.7, upon which the connection reconfiguration procedure ends;

NOTE 1: The UE may apply above failure handling also in case the *RRCConnectionReconfiguration* message causes a protocol error for which the generic error handling as defined in 5.7 specifies that the UE shall ignore the message.

NOTE 2: If the UE is unable to comply with part of the configuration, it does not apply any part of the configuration, i.e. there is no partial success/ failure.

NOTE 3: The compliance also covers the NR configuration carried within octet strings e.g. field *nr-SecondaryCellGroupConfig*. I.e. the failure behaviour defined also applies in case the UE cannot comply with the NR configuration or with the combination of (parts of) the LTE and NR configurations.

NOTE 4: The compliance also covers the NR sidelink configuration carried within an octet string, e.g. field *sl-ConfigDedicatedNR*, i.e. the failure behaviour defined also applies in case the UE cannot comply with the embedded NR sidelink configuration.

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| NEXT CHANGE |

### 6.3.2 Radio resource control information elements

– *RadioResourceConfigDedicated*

The IE *RadioResourceConfigDedicated* is used to setup/modify/release RBs, to modify the MAC main configuration, to modify the SPS configuration and to modify dedicated physical configuration.

***RadioResourceConfigDedicated* information element**

-- ASN1START

RadioResourceConfigDedicated ::= SEQUENCE {

 srb-ToAddModList SRB-ToAddModList OPTIONAL, -- Cond HO-Conn

 drb-ToAddModList DRB-ToAddModList OPTIONAL, -- Cond HO-toEUTRA

 drb-ToReleaseList DRB-ToReleaseList OPTIONAL, -- Need ON

 mac-MainConfig CHOICE {

 explicitValue MAC-MainConfig,

 defaultValue NULL

 } OPTIONAL, -- Cond HO-toEUTRA2

 sps-Config SPS-Config OPTIONAL, -- Need ON

 physicalConfigDedicated PhysicalConfigDedicated OPTIONAL, -- Need ON

 ...,

 [[ rlf-TimersAndConstants-r9 RLF-TimersAndConstants-r9 OPTIONAL -- Need ON

 ]],

 [[ measSubframePatternPCell-r10 MeasSubframePatternPCell-r10 OPTIONAL -- Need ON

 ]],

 [[ neighCellsCRS-Info-r11 NeighCellsCRS-Info-r11 OPTIONAL -- Need ON

 ]],

 [[ naics-Info-r12 NAICS-AssistanceInfo-r12 OPTIONAL -- Need ON

 ]],

 [[ neighCellsCRS-Info-r13 NeighCellsCRS-Info-r13 OPTIONAL, -- Cond CRSIM

 rlf-TimersAndConstants-r13 RLF-TimersAndConstants-r13 OPTIONAL -- Need ON

 ]],

 [[ sps-Config-v1430 SPS-Config-v1430 OPTIONAL -- Cond SPS

 ]],

 [[ srb-ToAddModListExt-r15 SRB-ToAddModListExt-r15 OPTIONAL, -- Need ON

 srb-ToReleaseListExt-r15 INTEGER (4) OPTIONAL, -- Need ON

 sps-Config-v1530 SPS-Config-v1530 OPTIONAL, -- Need ON

 crs-IntfMitigConfig-r15 CHOICE {

 release NULL,

 setup CHOICE {

 crs-IntfMitigEnabled NULL,

 crs-IntfMitigNumPRBs ENUMERATED {n6, n24}

 }

 } OPTIONAL, -- Need ON

 neighCellsCRS-Info-r15 NeighCellsCRS-Info-r15 OPTIONAL, -- Need ON

 drb-ToAddModList-r15 DRB-ToAddModList-r15 OPTIONAL, -- Need ON

 drb-ToReleaseList-r15 DRB-ToReleaseList-r15 OPTIONAL, -- Need ON

 dummy SEQUENCE (SIZE (1..2)) OF INTEGER (1..2) OPTIONAL -- Need ON

 ]],

 [[ sps-Config-v1540 SPS-Config-v1540 OPTIONAL -- Need ON

 ]],

 [[

 rlf-TimersAndConstantsMCG-Failure-r16 RLF-TimersAndConstantsMCG-Failure-r16

 OPTIONAL, -- Cond Split-SRB1-SRB3

 crs-ChEstMPDCCH-ConfigDedicated-r16 SetupRelease{CRS-ChEstMPDCCH-ConfigDedicated-r16} OPTIONAL, -- Need ON

 newUE-Identity-r16 C-RNTI OPTIONAL -- Need OP

 ]]

}

RadioResourceConfigDedicated-v1370 ::= SEQUENCE {

 physicalConfigDedicated-v1370 PhysicalConfigDedicated-v1370 OPTIONAL -- Need ON

}

RadioResourceConfigDedicated-v13c0 ::= SEQUENCE {

 physicalConfigDedicated-v13c0 PhysicalConfigDedicated-v13c0

}

RadioResourceConfigDedicatedPSCell-r12 ::= SEQUENCE {

 -- UE specific configuration extensions applicable for an PSCell

 physicalConfigDedicatedPSCell-r12 PhysicalConfigDedicated OPTIONAL, -- Need ON

 sps-Config-r12 SPS-Config OPTIONAL, -- Need ON

 naics-Info-r12 NAICS-AssistanceInfo-r12 OPTIONAL, -- Need ON

 ...,

 [[ neighCellsCRS-InfoPSCell-r13 NeighCellsCRS-Info-r13 OPTIONAL -- Need ON

 ]],

 [[ sps-Config-v1430 SPS-Config-v1430 OPTIONAL -- Cond SPS2

 ]],

 [[ sps-Config-v1530 SPS-Config-v1530 OPTIONAL, -- Need ON

 crs-IntfMitigEnabled-r15 BOOLEAN OPTIONAL, -- Need ON

 neighCellsCRS-Info-r15 NeighCellsCRS-Info-r15 OPTIONAL -- Need ON

 ]],

 [[ sps-Config-v1540 SPS-Config-v1540 OPTIONAL -- Need ON

 ]]

}

RadioResourceConfigDedicatedPSCell-v1370 ::= SEQUENCE {

 physicalConfigDedicatedPSCell-v1370 PhysicalConfigDedicated-v1370 OPTIONAL -- Need ON

}

RadioResourceConfigDedicatedPSCell-v13c0 ::= SEQUENCE {

 physicalConfigDedicatedPSCell-v13c0 PhysicalConfigDedicated-v13c0

}

RadioResourceConfigDedicatedSCG-r12 ::= SEQUENCE {

 drb-ToAddModListSCG-r12 DRB-ToAddModListSCG-r12 OPTIONAL, -- Need ON

 mac-MainConfigSCG-r12 MAC-MainConfig OPTIONAL, -- Need ON

 rlf-TimersAndConstantsSCG-r12 RLF-TimersAndConstantsSCG-r12 OPTIONAL, -- Need ON

 ...,

 [[ drb-ToAddModListSCG-r15 DRB-ToAddModListSCG-r15 OPTIONAL -- Need ON

 ]],

 [[ srb-ToAddModListSCG-r15 SRB-ToAddModList OPTIONAL, -- Need ON

 srb-ToReleaseListSCG-r15 SRB-ToReleaseList-r15 OPTIONAL -- Need ON

 ]],

 [[ -- NE-DC additions for release of RLC bearer config for DRBs

 drb-ToReleaseListSCG-r15 DRB-ToReleaseList-r15 OPTIONAL -- Need ON

 ]]

}

RadioResourceConfigDedicatedSCell-r10 ::= SEQUENCE {

 -- UE specific configuration extensions applicable for an SCell

 physicalConfigDedicatedSCell-r10 PhysicalConfigDedicatedSCell-r10 OPTIONAL, -- Need ON

 ...,

 [[ mac-MainConfigSCell-r11 MAC-MainConfigSCell-r11 OPTIONAL -- Cond SCellAdd

 ]],

 [[ naics-Info-r12 NAICS-AssistanceInfo-r12 OPTIONAL -- Need ON

 ]],

 [[ neighCellsCRS-InfoSCell-r13 NeighCellsCRS-Info-r13 OPTIONAL -- Need ON

 ]],

 [[ physicalConfigDedicatedSCell-v1370 PhysicalConfigDedicatedSCell-v1370 OPTIONAL -- Need ON

 ]],

 [[ crs-IntfMitigEnabled-r15 BOOLEAN OPTIONAL, -- Need ON

 neighCellsCRS-Info-r15 NeighCellsCRS-Info-r15 OPTIONAL, -- Need ON

 sps-Config-v1530 SPS-Config-v1530 OPTIONAL -- Need ON

 ]]

}

RadioResourceConfigDedicatedSCell-v13c0 ::= SEQUENCE {

 physicalConfigDedicatedSCell-v13c0 PhysicalConfigDedicatedSCell-v13c0

}

SRB-ToAddModList ::= SEQUENCE (SIZE (1..2)) OF SRB-ToAddMod

SRB-ToAddModListExt-r15 ::= SEQUENCE (SIZE (1)) OF SRB-ToAddMod

SRB-ToAddMod ::= SEQUENCE {

 srb-Identity INTEGER (1..2),

 rlc-Config CHOICE {

 explicitValue RLC-Config,

 defaultValue NULL

 } OPTIONAL, -- Cond Setup

 logicalChannelConfig CHOICE {

 explicitValue LogicalChannelConfig,

 defaultValue NULL

 } OPTIONAL, -- Cond Setup

 ...,

 [[ pdcp-verChange-r15 ENUMERATED {true} OPTIONAL, -- Cond NR-PDCP

 rlc-Config-v1530 RLC-Config-v1530 OPTIONAL, -- Need ON

 rlc-BearerConfigSecondary-r15 RLC-BearerConfig-r15 OPTIONAL, -- Need ON

 srb-Identity-v1530 INTEGER (4) OPTIONAL -- Need ON

 ]],

 [[ rlc-Config-v1560 RLC-Config-v1510 OPTIONAL -- Need ON

 ]]

}

DRB-ToAddModList ::= SEQUENCE (SIZE (1..maxDRB)) OF DRB-ToAddMod

DRB-ToAddModList-r15 ::= SEQUENCE (SIZE (1..maxDRB-r15)) OF DRB-ToAddMod

DRB-ToAddModListSCG-r12 ::= SEQUENCE (SIZE (1..maxDRB)) OF DRB-ToAddModSCG-r12

DRB-ToAddModListSCG-r15 ::= SEQUENCE (SIZE (1..maxDRB-r15)) OF DRB-ToAddModSCG-r12

DRB-ToAddMod ::= SEQUENCE {

 eps-BearerIdentity INTEGER (0..15) OPTIONAL, -- Cond DRB-Setup

 drb-Identity DRB-Identity,

 pdcp-Config PDCP-Config OPTIONAL, -- Cond PDCP

 rlc-Config RLC-Config OPTIONAL, -- Cond SetupM

 logicalChannelIdentity INTEGER (3..10) OPTIONAL, -- Cond DRB-SetupM

 logicalChannelConfig LogicalChannelConfig OPTIONAL, -- Cond SetupM

 ...,

 [[ drb-TypeChange-r12 ENUMERATED {toMCG} OPTIONAL, -- Need OP

 rlc-Config-v1250 RLC-Config-v1250 OPTIONAL -- Need ON

 ]],

 [[ rlc-Config-v1310 RLC-Config-v1310 OPTIONAL, -- Need ON

 drb-TypeLWA-r13 BOOLEAN OPTIONAL, -- Need ON

 drb-TypeLWIP-r13 ENUMERATED {lwip, lwip-DL-only,

 lwip-UL-only, eutran} OPTIONAL -- Need ON

 ]],

 [[ rlc-Config-v1430 RLC-Config-v1430 OPTIONAL, -- Need ON

 lwip-UL-Aggregation-r14 BOOLEAN OPTIONAL, -- Cond LWIP

 lwip-DL-Aggregation-r14 BOOLEAN OPTIONAL, -- Cond LWIP

 lwa-WLAN-AC-r14 ENUMERATED {ac-bk, ac-be, ac-vi, ac-vo} OPTIONAL -- Cond UL-LWA

 ]],

 [[ rlc-Config-v1510 RLC-Config-v1510 OPTIONAL -- Need ON

 ]],

 [[ rlc-Config-v1530 RLC-Config-v1530 OPTIONAL, -- Need ON

 rlc-BearerConfigSecondary-r15 RLC-BearerConfig-r15 OPTIONAL, -- Need ON

 logicalChannelIdentity-r15 INTEGER (32..38) OPTIONAL -- Need ON

 ]],

 [[ daps-HO-r16 ENUMERATED {true} OPTIONAL -- Cond DAPS

 ]]

}

DRB-ToAddModSCG-r12 ::= SEQUENCE {

 drb-Identity-r12 DRB-Identity,

 drb-Type-r12 CHOICE {

 split-r12 NULL,

 scg-r12 SEQUENCE {

 eps-BearerIdentity-r12 INTEGER (0..15) OPTIONAL, -- Cond DRB-Setup

 pdcp-Config-r12 PDCP-Config OPTIONAL -- Cond PDCP-S

 }

 } OPTIONAL, -- Cond SetupS2

 rlc-ConfigSCG-r12 RLC-Config OPTIONAL, -- Cond SetupS

 rlc-Config-v1250 RLC-Config-v1250 OPTIONAL, -- Need ON

 logicalChannelIdentitySCG-r12 INTEGER (3..10) OPTIONAL, -- Cond DRB-SetupS

 logicalChannelConfigSCG-r12 LogicalChannelConfig OPTIONAL, -- Cond SetupS

 ...,

 [[ rlc-Config-v1430 RLC-Config-v1430 OPTIONAL -- Need ON

 ]],

 [[ logicalChannelIdentitySCG-r15 INTEGER (32..38) OPTIONAL, -- Need ON

 rlc-Config-v1530 RLC-Config-v1530 OPTIONAL, -- Need ON

 rlc-BearerConfigSecondary-r15 RLC-BearerConfig-r15 OPTIONAL -- Need ON

 ]],

 [[ rlc-Config-v1560 RLC-Config-v1510 OPTIONAL -- Need ON

 ]]

}

DRB-ToReleaseList ::= SEQUENCE (SIZE (1..maxDRB)) OF DRB-Identity

DRB-ToReleaseList-r15 ::= SEQUENCE (SIZE (1..maxDRB-r15)) OF DRB-Identity

SRB-ToReleaseList-r15 ::= SEQUENCE (SIZE (1..2)) OF INTEGER (1..2)

MeasSubframePatternPCell-r10 ::= CHOICE {

 release NULL,

 setup MeasSubframePattern-r10

}

NeighCellsCRS-Info-r11 ::= CHOICE {

 release NULL,

 setup CRS-AssistanceInfoList-r11

}

CRS-AssistanceInfoList-r11 ::= SEQUENCE (SIZE (1..maxCellReport)) OF CRS-AssistanceInfo-r11

CRS-AssistanceInfo-r11 ::= SEQUENCE {

 physCellId-r11 PhysCellId,

 antennaPortsCount-r11 ENUMERATED {an1, an2, an4, spare1},

 mbsfn-SubframeConfigList-r11 MBSFN-SubframeConfigList,

 ...,

 [[ mbsfn-SubframeConfigList-v1430 MBSFN-SubframeConfigList-v1430 OPTIONAL -- Need ON

 ]]

}

NeighCellsCRS-Info-r13 ::= CHOICE {

 release NULL,

 setup CRS-AssistanceInfoList-r13

}

CRS-AssistanceInfoList-r13 ::= SEQUENCE (SIZE (1..maxCellReport)) OF CRS-AssistanceInfo-r13

CRS-AssistanceInfo-r13 ::= SEQUENCE {

 physCellId-r13 PhysCellId,

 antennaPortsCount-r13 ENUMERATED {an1, an2, an4, spare1},

 mbsfn-SubframeConfigList-r13 MBSFN-SubframeConfigList OPTIONAL, -- Need ON

 ...,

 [[ mbsfn-SubframeConfigList-v1430 MBSFN-SubframeConfigList-v1430 OPTIONAL -- Need ON

 ]]

}

NeighCellsCRS-Info-r15 ::= CHOICE {

 release NULL,

 setup CRS-AssistanceInfoList-r15

}

CRS-AssistanceInfoList-r15 ::= SEQUENCE (SIZE (1..maxCellReport)) OF CRS-AssistanceInfo-r15

CRS-AssistanceInfo-r15 ::= SEQUENCE {

 physCellId-r15 PhysCellId,

 crs-IntfMitigEnabled-r15 ENUMERATED {enabled} OPTIONAL -- Need ON

}

NAICS-AssistanceInfo-r12 ::= CHOICE {

 release NULL,

 setup SEQUENCE {

 neighCellsToReleaseList-r12 NeighCellsToReleaseList-r12 OPTIONAL , -- Need ON

 neighCellsToAddModList-r12 NeighCellsToAddModList-r12 OPTIONAL, -- Need ON

 servCellp-a-r12 P-a OPTIONAL -- Need ON

 }

}

NeighCellsToReleaseList-r12 ::= SEQUENCE (SIZE (1..maxNeighCell-r12)) OF PhysCellId

NeighCellsToAddModList-r12 ::= SEQUENCE (SIZE (1..maxNeighCell-r12)) OF NeighCellsInfo-r12

NeighCellsInfo-r12 ::= SEQUENCE {

 physCellId-r12 PhysCellId,

 p-b-r12 INTEGER (0..3),

 crs-PortsCount-r12 ENUMERATED {n1, n2, n4, spare},

 mbsfn-SubframeConfig-r12 MBSFN-SubframeConfigList OPTIONAL, -- Need ON

 p-aList-r12 SEQUENCE (SIZE (1..maxP-a-PerNeighCell-r12)) OF P-a,

 transmissionModeList-r12 BIT STRING (SIZE(8)),

 resAllocGranularity-r12 INTEGER (1..4),

 ...

}

P-a ::= ENUMERATED { dB-6, dB-4dot77, dB-3, dB-1dot77,

 dB0, dB1, dB2, dB3}

RLC-BearerConfig-r15 ::= CHOICE {

 release NULL,

 setup SEQUENCE {

 rlc-Config-r15 RLC-Config-r15 OPTIONAL, -- Need ON

 logicalChannelIdentityConfig-r15 CHOICE {

 logicalChannelIdentity-r15 INTEGER (1..10),

 logicalChannelIdentityExt-r15 INTEGER (32..38)

 },

 logicalChannelConfig-r15 LogicalChannelConfig OPTIONAL -- Need ON

 }

}

-- ASN1STOP

| ***RadioResourceConfigDedicated* field descriptions** |
| --- |
| ***crs-ChEstMPDCCH-ConfigDedicated***Indicates whether use of CRS for improving channel estimation on MPDCCH is enabled in RRC\_CONNECTED. If this field is not configured, the field *crs-ChEstMPDCCH-ConfigCommon* in *SystemInformationBlockType2* applies, if present. |
| ***crs-IntfMitigConfig****crs-IntfMitigEnabled-r15* indicates CRS interference mitigation is enabled for the cell, as specified in TS 36.133 [16], clause 3.6.1.1. For BL UEs supporting *ce-CRS-IntfMitig,* presence of this field indicates CRS interference mitigation is enabled in the cell, as specified in TS 36.133 [16], clauses 3.6.1.2 and 3.6.1.3, and the value *crs-IntfMitigNumPRBs* indicatesnumber of PRBs, i.e. 6 or 24 PRBs, for CRS transmission in the central cell BW when CRS interference mitigation is enabled. For UEs not supporting this feature, the behaviour is undefined if this field is configured and the field *cellBarred* in *SystemInformationBlockType1* (*SystemInformationBlockType1-BR* for BL UEs or UEs in CE) is set to *notbarred*. |
| ***crs-PortsCount***Parameter represents the number of antenna ports for cell-specific reference signal used by the signaled neighboring cell where n1 corresponds to 1 antenna port, n2 to 2 antenna ports etc. see TS 36.211 [21], clause 6.10.1. |
| ***daps-HO***This field indicates that the handover, triggered in the same *RRCConnectionReconfiguration* message, shall be performed as a DAPS HO for the DRB. *daps-HO* is not configured if sidelink is configured. |
| ***drb-Identity***In case of DC, the DRB identity is unique within the scope of the UE i.e. an SCG DRB can not use the same value as used for an MCG or split DRB. For a split DRB the same identity is used for the MCG- and SCG parts of the configuration. |
| ***drb-ToAddModList***When *drb-ToAddModList-r15* is configured, UE shall ignore the *drb-ToAddModList* (without suffix). |
| ***drb-ToAddModListSCG***When an SCG is configured, E-UTRAN configures at least one SCG or split DRB. *When drb-ToAddModListSCG-r15* is configured, UE shall ignore the *drb-ToAddModListSCG* (without suffix). When NE-DC is configured, this field indicates the SCG RLC bearers to be (re-)configured. |
| ***drb-ToReleaseList***When *drb-ToReleaseList-r15* is configured, UE shall ignore the *drb-ToReleaseList* (without suffix). |
| ***drb-ToReleaseListSCG***When NE-DC is configured, this field indicates the SCG RLC bearers to be released. |
| ***drb-Type***This field indicates whether the DRB is split or SCG DRB. E-UTRAN does not configure split and SCG DRBs simultaneously for the UE. |
| ***drb-TypeChange***Indicates that a split/SCG DRB is reconfigured to an MCG DRB (i.e. E-UTRAN only signals the field in case the DRB type changes). |
| ***drb-TypeLWA***Indicates whether a DRB is (re)configured as an LWA DRB or an LWA DRB is reconfigured not to use WLAN resources. NOTE 1 |
| ***drb-TypeLWIP***Indicates whether a DRB is (re)configured to use LWIP Tunnel in UL and DL (value *lwip*), DL only (value *lwip-DL-only*), UL only (value *lwip-UL-only*) or not to use LWIP Tunnel (value *eutran*). |
| ***dummy***This field is not used in the specification. If received it shall be ignored by the UE. |
| ***logicalChannelConfig***For SRBs a choice is used to indicate whether the logical channel configuration is signalled explicitly or set to the default logical channel configuration for SRB1 as specified in 9.2.1.1 or for SRB2 as specified in 9.2.1.2. |
| ***logicalChannelIdentity, LogicalChannelIdentityExt***The logical channel identity for both UL and DL. Value 4 is not configured for DRBs if SRB4 is configured. When *logicalChannelIdentity-r15* is signalled, UE shall ignore contents of *logicalChannelIdentity* (without suffix). |
| ***logicalChannelIdentitySCG***The logical channel identity for both UL and DL. When *logicalChannelIdentitySCG-r15* is signalled, UE shall ignore contents of *logicalChannelIdentitySCG* (without suffix). |
| ***lwa-WLAN-AC***For LWA bearers, indicates the corresponding WLAN access category for uplink. AC-BK (value *ac-bk*) corresponds to Background access category, AC-BE (value *ac-be*) corresponds to Best Effort access category, AC-VI (value *ac-vi*) corresponds to Video access category and AC-VO (value *ac-vo*) corresponds to Voice access category as defined by IEEE 802.11-2012 [67]. If *lwa-WLAN-AC* is not configured, it is left up to UE to decide which IEEE 802.11 AC value to use when performing transmissions of packets for this DRB over WLAN in the uplink. |
| ***lwip-DL-Aggregation, lwip-UL-Aggregation***Indicates whether LWIP is configured to utilize LWIP aggregation in DL or UL. |
| ***mac-MainConfig***Although the ASN.1 includes a choice that is used to indicate whether the mac-MainConfig is signalled explicitly or set to the default MAC main configuration as specified in 9.2.2, EUTRAN does not apply "*defaultValue*". |
| ***mbsfn-SubframeConfig***Defines the MBSFN subframe configuration used by the signaled neighboring cell. If absent, UE assumes no MBSFN configuration for the neighboring cell. |
| ***measSubframePatternPCell***Time domain measurement resource restriction pattern for the PCell measurements (RSRP, RSRQ and the radio link monitoring). |
| ***neighCellsCRS-Info, neighCellsCRS-InfoSCell, neighCellsCRS-InfoPSCell***This field contains assistance information used by the UE to mitigate interference from CRS while performing RRM/RLM/CSI measurement or data demodulation or DL control channel demodulation. When the received CRS assistance information is for a cell with CRS non-colliding with that of the CRS of the cell to measure, the UE may use the CRS assistance information to mitigate CRS interference. When the received CRS assistance information is for a cell with CRS colliding with that of the CRS of the cell to measure, the UE may use the CRS assistance information to mitigate CRS interference RRM/RLM (as specified in TS 36.133 [16]) and for CSI (as specified in TS 36.101 [42]) on the subframes indicated by *measSubframePatternPCell*, *measSubframePatternConfigNeigh*, *csi-MeasSubframeSet1* ifconfigured, and the CSI subframe set 1 if *csi-MeasSubframeSets-r12* is configured. The UE may use CRS assistance information to mitigate CRS interference from the cells in the *CRS-AssistanceInfoList* for the demodulation purpose or DL control channel demodulation as specified in TS 36.101 [42]. EUTRAN does not configure *neighCellsCRS-Info-r11* or *neighCellsCRS-Info-r13* if *eimta-MainConfigPCell-r12* is configured. |
| ***neighCellsToAddModList***This field contains assistance information used by the UE to cancel and suppress interference of a neighbouring cell. If this field is present for a neighbouring cell, the UE assumes that the transmission parameters listed in the sub-fields are used by the neighbouring cell. If this field is present for a neighbouring cell, the UE assumes the neighbour cell is subframe and SFN synchronized to the serving cell, has the same system bandwidth, UL/DL and special subframe configuration, and cyclic prefix length as the serving cell. |
| ***newUE-Identity***C-RNTI used after moving to RRC\_CONNECTED in response to transmission using PUR. |
| ***p-aList***Indicates the restricted subset of power offset for QPSK, 16QAM, and 64QAM PDSCH transmissions for the neighbouring cell by using the parameter, see TS 36.213 [23], clause 5.2. Value dB-6 corresponds to -6 dB, dB-4dot77 corresponds to -4.77 dB etc. |
| ***p-b***Parameter: , indicates the cell-specific ratio used by the signaled neighboring cell, see TS 36.213 [23], Table 5.2-1. |
| ***pdcp-verChange***Indicates that the PDCP version of the SRB is changed from NR PDCP to E-UTRA PDCP. Network only configures this version change for during handover, resume and first reconfiguration after re-establishment. E-UTRAN does not include this field when *SRB-ToAddMod* is included in *srb-ToAddModListSCG*. |
| ***physicalConfigDedicated***The default dedicated physical configuration is specified in 9.2.4. |
| ***resAllocGranularity***Indicates the resource allocation and precoding granularity in PRB pair level of the signaled neighboring cell, see TS 36.213 [23], clause 7.1.6. |
| ***rlc-BearerConfigSecondary***The configuration of a secondary RLC bearer within the same Cell Group as may e.g. be used in case of PDCP duplication using CA. The configuration comprises a (secondary) RLC entity, a logical channel identity and a logical channel configuration. E-UTRAN may configure this for SRB1, SRB2 and DRBs. For SRBs, E-UTRAN only configures the field for MCG (i.e. if included in *radioResourceConfigDedicated*. E-UTRAN configures the same RLC mode (AM/ UM) as used for the original RLC entity. The primary RLC entity is configured by *RLC-Config*. |
| ***rlc-Config***For SRBs a choice is used to indicate whether the RLC configuration is signalled explicitly or set to the values defined in the default RLC configuration for SRB1 in 9.2.1.1 or for SRB2 in 9.2.1.2. RLC AM is the only applicable RLC mode for SRB1 and SRB2. E-UTRAN does not reconfigure the RLC mode of DRBs except when a full configuration option is used, and may reconfigure the RLC SN field size and the AM RLC LI field size only upon handover within E-UTRA or upon the first reconfiguration after RRC connection re-establishment or upon SCG Change for SCG and split DRBs. |
| ***servCellp-a***Indicates the power offset for QPSK C-RNTI based PDSCH transmissions used by the serving cell, see TS 36.213 [23], clause 5.2. Value dB-6 corresponds to -6 dB, dB-4dot77 corresponds to -4.77 dB etc. |
| ***sps-Config***The default SPS configuration is specified in 9.2.3. Except for handover or releasing SPS for MCG, E-UTRAN does not reconfigure *sps-Config* for MCG when there is a configured downlink assignment or a configured uplink grant for MCG (see TS 36.321 [6]). Except for SCG change or releasing SPS for SCG, E-UTRAN does not reconfigure *sps-Config* for SCG when there is a configured downlink assignment or a configured uplink grant for SCG (see TS 36.321 [6]). In one serving cell, *sps-Config-v1530* is not present simultaneously with either *sps-Config* (without suffix) or *sps-Config-r12*. |
| ***srb-Identity***Value 1 is applicable for SRB1 only. Value 2 is applicable for SRB2 only. Value 4 is applicable for SRB4 only, if configured. For a split SRB the same identity is used for the MCG and NR SCG RLC bearer configurations. If *srb-Identity-v1530* is received, the UE shall ignore *srb-Identity* (i.e. without suffix). |
| ***srb-Identity-v1530***E-UTRAN does not include this field when *SRB-ToAddMod* is included in *srb-ToAddModListSCG*. |
| ***srb-ToAddModListExt***The field is to configure SRB4. |
| ***srb-ToAddModList***E-UTRAN configures the same RAT type (i.e. EUTRA or NR) for PDCP configuration of SRB1 and SRB2. |
| ***transmissionModeList***Indicates a subset of transmission mode 1, 2, 3, 4, 6, 8, 9, 10, for the signaled neighboring cell for which *NeighCellsInfo* applies. When TM10 is signaled, other signaled transmission parameters in *NeighCellsInfo* are not applicable to up to 8 layer transmission scheme of TM10. E-UTRAN may indicate TM9 when TM10 with QCL type A and DMRS scrambling with  in TS 36.211 [21], clause 6.10.3.1, is used in the signalled neighbour cell and TM9 or TM10 with QCL type A and DMRS scrambling with  in TS 36.211 [21], clause 6.10.3.1, is used in the serving cell. UE behaviour with NAICS when TM10 is used is only defined when QCL type A and DMRS scrambling with  in TS 36.211 [21], clause 6.10.3.1, is used for the serving cell and all signalled neighbour cells. The first/ leftmost bit is for transmission mode 1, the second bit is for transmission mode 2, and so on. |

NOTE 1: It is up to eNB to ensure that the field indicating LWA bearer type is set to FALSE when LWA bearer is no longer used (e.g. during handover or re-establishment where LWA configuration is released).

| **Conditional presence** | **Explanation** |
| --- | --- |
| CRSIM | The field is optionally present, need ON, if *neighCellsCRS-Info-r11* is not present; otherwise it is not present. |
| *DRB-Setup* | The field is mandatory present if the corresponding DRB is being set up and the UE is connected to EPC; otherwise it is not present. |
| *DRB-SetupM* | The field is:- mandatory present:- for the UE without SCG: upon setup of MCG DRB;- for E-UTRA DC, upon setup of MCG or split DRB;- for (NG)EN-DC:- upon setup of MCG RLC bearer;- optionally present, Need ON:- for E-UTRA DC, upon change from SCG to MCG DRB;- for (NG)EN-DC:- upon change of *keyToUse*, as defined in TS 38.331 [82], for a DRB configured with an MCG RLC bearer;- when configured with MCG RLC bearer, upon change of S-KgNB without handover;- not present otherwise. |
| *DRB-SetupS* | The field is:- mandatory present:- for E-UTRA DC:- upon setup of SCG or split DRB;- upon change from MCG to split DRB;- for NE-DC:- upon setup of SCG RLC bearer;- optionally present, Need ON:- for E-UTRA DC, upon change from MCG to SCG DRB;- for NE-DC, upon change of *keyToUse*, as defined in TS 38.331 [82], for a DRB configured with an SCG RLC bearer;- not present otherwise. |
| *HO-Conn* | The field is mandatory present in case of handover to E-UTRA or when the *fullConfig* is included in the *RRCConnectionReconfiguration* message or in case of RRC connection establishment (excluding *RRConnectionResume*); otherwise the field is optionally present, need ON. Upon connection establishment/ re-establishment only SRB1 is applicable (excluding *RRConnectionResume*). |
| *HO-toEUTRA* | The field is mandatory present- in case of handover to E-UTRA with the configuration for at least one MCG RLC bearer; or- when the *fullConfig* is included in the *RRCConnectionReconfiguration* message with the configuration for at least one MCG bearer or split data bearer;In case of RRC connection establishment (excluding *RRConnectionResume*); and RRC connection re-establishment the field is not present; otherwise the field is optionally present, need ON. |
| *HO-toEUTRA2* | The field is mandatory present in case of handover to E-UTRA or when the *fullConfig* is included in the *RRCConnectionReconfiguration* message; otherwise the field is optionally present, need ON. |
| *LWIP* | The field is optionally present, Need ON, if *drb-TypeLWIP-r13* is configured and not set to eutran; otherwise it is not present and the UE shall delete any existing value for this field. |
| *DAPS* | This field is optionally present, Need ON,- in case of handover within E-UTRA when the *fullConfig* and the *rach-Skip* are not included in the *RRCConnectionReconfiguration* message; and- when the *uplinkDataCompression* and the *ethernetHeaderCompression* are not configured for the DRB; and- when SCell(s) and SCG are not configured; and- when the *RRCConnectionReconfiguration* message is not included in a *conditionalReconfiguration*.Otherwise the field is not present. |
| *NR-PDCP* | The field is optional present, Need ON, when the SRB is configured with NR-PDCP prior to reception of this reconfiguration message. Otherwise it is not present. |
| *PDCP* | The field is mandatory present:- when connected to E-UTRA/EPC:- for the bearers configured with E-UTRA PDCP, if the corresponding DRB is being setup;the field is optionally present, need ON: :- when connected to E-UTRA/EPC:- for the bearers configured with E-UTRA PDCP, upon reconfiguration of the corresponding split DRB or LWA DRB, upon the corresponding DRB type change from split to MCG bearer, upon the corresponding DRB type change from MCG to split bearer or LWA bearer, upon the corresponding DRB type change from LWA to LTE only bearer, upon handover within E-UTRA and upon the first reconfiguration after re-establishment but in all these cases only when *fullConfig* is not included in the *RRCConnectionReconfiguration* message;otherwise it is not present. |
| *PDCP-S* | The field is mandatory present if the corresponding DRB is being setup; the field is optionally present, need ON, upon SCG change; otherwise it is not present. |
| *RLC-Setup* | This field is optionally present if the corresponding DRB is being setup, need ON; otherwise it is not present. |
| *SCellAdd* | The field is optionally present, need ON, upon SCell addition; otherwise it is not present. |
| *Setup* | The field is mandatory present if the corresponding SRB/DRB is being setup; otherwise the field is optionally present, need ON. |
| *SetupM* | The field is mandatory present upon setup of an MCG or split DRB, or upon setup of MCG RLC bearer; otherwise the field is optionally present, need ON. |
| *SetupS* | The field is mandatory present:- for E-UTRA DC:- upon setup of an SCG or split DRB,- upon change from MCG to split DRB;- for NE-DC, upon setup of SCG RLC bearer;otherwise the field is optionally present, need ON. |
| *SetupS2* | The field is:- mandatory present:- for E-UTRA DC:- upon setup of an SCG or split DRB, as well as upon change from MCG to split or SCG DRB.- optionally present, need ON:- for E-UTRA DC:- for an SCG DRBotherwise the field is not present. |
| *Split-SRB1-SRB3* | This field is optionally present, Need ON, if the UE is configured with split SRB1 or SRB3. It is absent otherwise. |
| *SPS* | The field is optionally present, need ON, if sps-Config (without suffix) is not configured; otherwise it is not present. |
| *SPS2* | The field is optionally present, need ON, if sps-Config-r12 is not configured; otherwise it is not present. |
| *UL-LWA* | The field is optionally present, need ON if *ul-LWA-Config-r14* is present. Otherwise the field is not present. |