**3GPP TSG-RAN WG3 Meeting #114-e R3-21xxxx**

**E-meeting, 1-11 Nov 2021**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.423** | **CR** |  | **rev** | **<Rev#>** | **Current version:** | **16.7.0** |  |
|  | | | | | | | | |
| *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 |  |

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| ***Title:*** | CSI-RS configuration request Indicator [CSIRS-Req] | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson, China telecom, Huawei, ZTE, Nokia, Nokia Shanghai Bell | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | TEI17 | | | | |  | ***Date:*** | | | 2021-11-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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 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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | It is benificial for a node to request CSI-RS configurations for certain cells served by neighbour gNBs in X2 setup and EN-DC Configuration update procedures. In order to avoid sending CSI-RS information to nodes that will not need this information, a requested indicator is proposed to be added in the request message. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add the *Enhanced Cell Assistance Information NR* IE in EN-DC X2 Setup request and EN-DC configuration update request messages. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Redundant CSI-RS configurations that are useless may be transferred to neighour node. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS38.423 CR xxxx | | |
| ***affected:*** | |  |  | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  |  | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Changes Start>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

### 8.7.1 EN-DC X2 Setup

#### 8.7.1.1 General

The purpose of the EN-DC X2 Setup procedure is to exchange application level configuration data needed for eNB and en-gNB to interoperate correctly over the X2 interface. This procedure erases any existing application level configuration data in the two nodes and replaces it by the one received. This procedure also resets the X2 interface like a Reset procedure would do.

NOTE 1: If X2-C signalling transport is shared among multiple X2-C interface instances, one EN-DC X2 Setup procedure is issued per X2-C interface instance to be setup, i.e. several X2 Setup procedures may be issued via the same TNL association after that TNL association has become operational.

NOTE 2: Exchange of application level configuration data also applies between eNB and en-gNB in case the SN (i.e. the en-gNB) does not broadcast system information other than for radio frame timing and SFN, as specified in the TS 37.340 [32]. How to use this information when this option is used is not explicitly specified.

The procedure uses non UE-associated signalling.

#### 8.7.1.2 Successful Operation



Figure 8.7.1.2-1: eNB Initiated EN-DC X2 Setup, successful operation



Figure 8.7.1.2-2: en-gNB Initiated EN-DC X2 Setup, successful operation

If case of network sharing with multiple cell ID broadcast with shared X2-C signalling transport, as specified in TS 36.300 [15], the EN-DC X2 SETUP REQUEST message and the EN-DC X2 SETUP RESPONSE message shall include the *Interface Instance Indication* IE to identify the corresponding interface instance. In the current version of this specification an eNB shall not include the *Interface Instance Indication* IE in the *Initiating NodeType* IE in the EN-DC X2 SETUP REQUEST message.

If the *SFN Offset* IE is included in the EN-DC X2 SETUP REQUEST or EN-DC X2 SETUP RESPONSE message, the receiving node shall, if supported, use this information to deduce the SFN0 time offset of the reported cell. The receiving node shall consider the received *SFN Offset* IE content valid until reception of an update of the IE for the same cell(s).

**eNB initiated EN-DC X2 Setup:**

An eNB initiates the procedure by sending the EN-DC X2 SETUP REQUEST message to a candidate en-gNB. The candidate en-gNB replies with the EN-DC X2 SETUP RESPONSE message. The initiating eNB shall transfer the complete list of its served cells to the candidate en-gNB. The candidate en-gNB shall reply with the complete list of its served cells or if supported, a partial list of its served cells together with the *Partial List Indicator* IE, according to the received information in *Cell and Capacity Assistance Information* IE in EN-DC X2 SETUP REQUEST message. If Supplementary Uplink is configured at the candidate en-gNB, the candidate en-gNB shall include in the EN-DC X2 SETUP RESPONSE message the *SUL Information* IE and the *Supported SUL band List* IE for each served cell where supplementary uplink is configured.

If the EN-DC X2 SETUP REQUEST message contains the *Protected E-UTRA Resource Indication* IE, the receiving en-gNB should take this into account for cell-level resource coordination with the eNB. The en-gNB shall consider the received *Protected E-UTRA Resource Indication* IE content valid until reception of a new update of the IE for the same eNB.

The protected resource pattern indicated in the *Protected E-UTRA Resource Indication* IE is not valid in subframes indicated by the *Reserved Subframes* IE, as well as in the non-control region of the MBSFN subframes i.e. it is valid only in the control region therein. The size of the control region of MBSFN subframes is indicated in the *Protected E-UTRA Resource Indication* IE.

If the *Partial List Indicator* IE is set to "partial" in the EN-DC X2 SETUP RESPONSE message from the en-gNB, the eNB shall, if supported, assume that the en-gNB has included in the *List of Served Cells NR* IE a partial list of cells.

If the EN-DC X2 SETUP REQUEST message contains the *TNL Transport Layer Address info* IE, the receiving en-gNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the EN-DC X2 SETUP RESPONSE message contains the *TNL Transport Layer Address info* IE, the receiving eNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the *NR Cell PRACH Configuration* IE is included in the *Served NR Cell Information* IE contained in the EN-DC X2 SETUP RESPONSE message, the eNB may store the information.

If the *CSI-RS Transmision Indication* IE is contained in the EN-DC X2 SETUP REQUEST message, the en-gNB may use this information for neighbour NR cell’s CSI-RS measurement.

If the *Intended TDD DL-UL Configuration NR* IE is contained in the *NR Neighbour Information* IE in the EN-DC X2 SETUP REQUEST message, en-gNB should take this information into account for cross-link interference management. The en-gNB shall consider the received *Intended TDD DL-UL Configuration NR* IE content valid until reception of an update of the IE for the same cell(s).

If the *Enhanced Cell Assistance Information NR* IE is included in the EN-DC X2 SETUP REQUEST message, the en-gNB shall, if supported, include the *Additional Measurement Timing Configuration List* IE for the NR cells indicated in the *CSI-RS Configuration Request Information* IE in the EN-DC SETUP RESPONSE message.

**Interaction with the eNB Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC X2 SETUP RESPONSE message to neighbouring eNBs by triggering the eNB Configuration Update procedure.

**Interaction with the EN-DC Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC X2 SETUP RESPONSE message to neighbouring en-gNBs by triggering the EN-DC Configuration Update procedure.

**en-gNB initiated EN-DC X2 Setup:**

An en-gNB initiates the procedure by sending the EN-DC X2 SETUP REQUEST message to a candidate eNB. The candidate eNB replies with the EN-DC X2 SETUP RESPONSE message. The initiating en-gNB shall transfer the complete list of its served cells or if supported, a partial list of its served cells together with the *Partial List Indicator* IE in the EN-DC X2 SETUP REQUEST message to the candidate eNB. The candidate eNB shall reply with the complete list of its served cells.

If Supplementary Uplink is configured at the en-gNB, the en-gNB shall include in the EN-DC X2 SETUP REQUEST message the *SUL Information* IE and the *Supported SUL band List* IE for each served cell where supplementary uplink is configured.

If the EN-DC X2 SETUP RESPONSE message contains the *Protected E-UTRA Resource Indication* IE, the receiving en-gNB should take this into account for cell-level resource coordination with the eNB. The en-gNB shall consider the received *Protected E-UTRA Resource Indication* IE content valid until reception of a new update of the IE for the same eNB.

If the *Partial List Indicator* IE is set to "partial" in the EN-DC X2 SETUP REQUEST message from the en-gNB, the eNB shall, if supported, assume that the en-gNB has included in the *List of Served Cells NR* IE a partial list of cells.

If the *Cell and Capacity Assistance Information* IE is present in the EN-DC X2 SETUP RESPONSE message from the eNB, the en-gNBshall, if supported, store the collected information to be used for future interface management.

If the EN-DC X2 SETUP REQUEST message contains the *TNL Transport Layer Address info* IE, the receiving eNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the EN-DC X2 SETUP RESPONSE message contains the *TNL Transport Layer Address info* IE, the receiving en-gNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the *NR Cell PRACH Configuration* IE is included in the *Served NR Cell Information* IE contained in the EN-DC X2 SETUP REQUEST message, the eNB may store the information.

If the *CSI-RS Transmision Indication* IE is contained in the EN-DC X2 SETUP REQUEST message, the eNB should take it into account when forwarding neighbour NR cell’s CSI-RS configuration.

If the *Intended TDD DL-UL Configuration NR* IE is contained in the *NR Neighbour Information* IE in the EN-DC X2 SETUP RESPONSE message, en-gNB should take this information into account for cross-link interference management. The en-gNB shall consider the received *Intended TDD DL-UL Configuration NR* IE content valid until reception of an update of the IE for the same cell(s).

**Interaction with the eNB Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC X2 SETUP REQUEST message to neighbouring eNBs by triggering the eNB Configuration Update procedure.

**Interaction with the EN-DC Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC X2 SETUP REQUEST message to neighbouring en-gNBs by triggering the EN-DC Configuration Update procedure.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

### 8.7.2 EN-DC Configuration Update

#### 8.7.2.1 General

The purpose of the EN-DC Configuration Update procedure is to update application level configuration data needed for eNB and en-gNB to interoperate correctly over the X2 interface.

NOTE: Update of application level configuration data also applies between eNB and en-gNB in case the SN (i.e. the en-gNB) does not broadcast system information other than for radio frame timing and SFN, as specified in the TS 37.340 [32]. How to use this information when this option is used is not explicitly specified.

The procedure uses non UE-associated signalling.

#### 8.7.2.2 Successful Operation



Figure 8.7.2.2-1: eNB Initiated EN-DC Configuration Update, successful operation



Figure 8.7.2.2-2: en-gNB Initiated EN-DC Configuration Update, successful operation

If case of network sharing with multiple cell ID broadcast with shared X2-C signalling transport, as specified in TS 36.300 [15], the EN-DC CONFIGURATION UPDATE message and the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message shall include the *Interface Instance Indication* IE to identify the corresponding interface instance.

If the *SFN Offset* IE is included in the EN-DC CONFIGURATION UPDATE or EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message, the receiving node shall, if supported, use this information to update the SFN0 time offset of the reported cell.

**eNB initiated EN-DC Configuration Update:**

An eNB initiates the procedure by sending an EN-DC CONFIGURATION UPDATE message to a peer en-gNB.

After successful update of requested information, en-gNB shall reply with the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message to inform the initiating eNB that the requested update of application data was performed successfully.

If the *Cell Assistance Information* IE is present, the en-gNB shall, if supported, use it to generate the *List of Served NR Cells* IE and include the list in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message.

If the EN-DC CONFIGURATION UPDATE REQUEST message contains the Protected E-UTRA Resource Indication IE, the receiving en-gNB should take this into account for cell-level resource coordination with the eNB. The en-gNB shall consider the received Protected E-UTRA Resource Indication IE content valid until reception of a new update of the IE for the same eNB. The protected resource pattern indicated in the Protected E-UTRA Resource Indication IE is not valid in subframes indicated by the Reserved Subframes IE, as well as in the non-control region of the MBSFN subframes i.e. it is valid only in the control region therein. The size of the control region of MBSFN subframes is indicated in the Protected E-UTRA Resource Indication IE.

The eNB may initiate a further EN-DC Configuration Update procedure only after a previous EN-DC Configuration Update procedure has been completed.

If Supplementary Uplink is configured at the en-gNB, the en-gNB shall include in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message the *SUL Information* IE and the *Supported SUL band List* IE for each cell added in the Served NR Cells To Add IE and in the Served NR Cells To Modify IE.

If the EN-DC CONFIGURATION UPDATE message contains the *TNL Transport Layer Address info* IE, the receiving en-gNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message contains the *TNL Transport Layer Address info* IE, the receiving eNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the *NR Cell PRACH Configuration* IE is included in the *Served NR Cell Information* IE contained in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message, the eNB may update the information.

If the C*SI-RS Transmision Indication* IE is contained in the EN-DC CONFIGURATION UPDATE message, the en-gNB may use this information for neighbour NR cell’s CSI-RS measurement.

If the *Intended TDD DL-UL Configuration NR* IE is contained in the *NR Neighbour Information* IE in the EN-DC CONFIGURATION UPDATE message, en-gNB should take this information into account for cross-link interference management. The en-gNB shall consider the received *Intended TDD DL-UL Configuration NR* IE content valid until reception of an update of the IE for the same cell(s).

If the *Enhanced Cell Assistance Information NR* IE is included in the EN-DC CONFIGURATION UPDATE message, the en-gNB shall, if supported, include the *Additional Measurement Timing Configuration List* IE for the NR cells indicated in the *CSI-RS Configuration Request Information* IE in the EN-DC NODE CONFIGURATION UPDATE ACKNOWLEDGE message.

**Interaction with the eNB Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message to neighbouring eNBs by triggering the eNB Configuration Update procedure.

**Interaction with the EN-DC Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message to neighbouring en-gNBs by triggering the EN-DC Configuration Update procedure.

**en-gNB initiated EN-DC Configuration Update:**

An en-gNB initiates the procedure by sending an EN-DC CONFIGURATION UPDATE message to an eNB.

If Supplementary Uplink is configured at the en-gNB, the en-gNB shall include in the EN-DC CONFIGURATION UPDATE message the *SUL Information* IE and the *Supported SUL band List* IE for each served cell added in the Served NR Cells To Add IE and in the Served NR Cells To Modify IE.

If the Deactivation Indication IE is contained in the *Served NR Cells To Modify* IE, it indicates that the concerned NR cell was switched off to lower energy consumption, and is available for activation on request from the eNB, as described in TS 36.300 [15].

After successful update of requested information, eNB shall reply with the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message to inform the initiating en-gNB that the requested update of application data was performed successfully. In case the eNB receives an EN-DC CONFIGURATION UPDATE without any IE except for *Message Typ*eIE it shall reply with EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message without performing any updates to the existing configuration.

Upon reception of an EN-DC CONFIGURATION UPDATE message, eNB shall update the information for en-gNB as follows:

**Update of Served NR Cell Information:**

- If *Served NR Cells To Add* IE is contained in the EN-DC CONFIGURATION UPDATE message, eNB shall add cell information according to the information in the *Served NR Cell Information* IE.

- If *Served NR Cells To Modify* IE is contained in the EN-DC CONFIGURATION UPDATE message, eNB shall modify information of cell indicated by *Old NR-CGI* IE according to the information in the *Served NR Cell Information* IE.

- If *Served NR Cells To Delete* IE is contained in the EN-DC CONFIGURATION UPDATE message, eNB shall delete information of cell indicated by *Old NR-CGI* IE.

The en-gNB may initiate a further EN-DC Configuration Update procedure only after a previous EN-DC Configuration Update procedure has been completed.

If the EN-DC CONFIGURATION UPDATE message contains the *TNL Transport Layer Address info* IE, the receiving eNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message contains the *TNL Transport Layer Address info* IE, the receiving en-gNB shall, if supported, take this into account for IPSEC tunnel establishment.

If the *NR Cell PRACH Configuration* IE is included in the *Served NR Cell Information* IE contained in the EN-DC CONFIGURATION UPDATE message, the eNB may update the information.

If the *CSI-RS Transmision Indication* IE is contained in the EN-DC CONFIGURATION UPDATE message, the eNB should take it into account when forwarding neighbour NR cell’s CSI-RS configuration.

**Update of SCTP associations:**

If the *TNL Association to Add List* IE is included in the EN-DC CONFIGURATION UPDATE message, the receiving eNB shall, if supported, use it to establish the TNL association(s) with the en-gNB. The eNB shall report to the en-gNB, in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message, the successful establishment of the TNL association(s) with the en-gNB as follows:

- A list of successfully established TNL associations shall be included in the *TNL Association Setup List* IE;

- A list of TNL associations that failed to be established shall be included in the *TNL Association Failed to Setup List* IE.

If the *TNL Association to Remove List* IE is included in the EN-DC CONFIGURATION UPDATE message, the receiving eNB shall, if supported, initiate removal of the TNL association(s) indicated by the received Transport Layer information towards the en-gNB.

If the *TNL Association to Update List* IE is included in the EN-DC CONFIGURATION UPDATE message the receiving eNB shall, if supported, update the TNL association(s) indicated by the received Transport Layer information towards the en-gNB.

If the *Intended TDD DL-UL Configuration NR* IE is contained in the *NR Neighbour Information* IE in the EN-DC CONFIGURATION UPDATE ACKNOWLEDGE message, en-gNB should take this information into account for cross-link interference management. The en-gNB shall consider the received *Intended TDD DL-UL Configuration NR* IE content valid until reception of an update of the IE for the same cell(s).

**Interaction with the eNB Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC CONFIGURATION UPDATE message to neighbouring eNBs by triggering the eNB Configuration Update procedure.

**Interaction with the EN-DC Configuration Update procedure:**

The receiving eNB may forward the *Intended TDD DL-UL Configuration NR* IE received in the *Served NR Cell Information* IE in the EN-DC CONFIGURATION UPDATE message to neighbouring en-gNBs by triggering the EN-DC Configuration Update procedure.

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

#### 9.1.2.31 EN-DC X2 SETUP REQUEST

This message is sent by an initiating node to a neighbouring node, both nodes able to interact for EN-DC, to transfer the initialization information for a TNL association.

Direction: eNB → en-gNB, en-gNB → eNB.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.13 |  | YES | reject |
| CHOICE *Initiating NodeType* | M |  |  |  | YES | reject |
| >*eNB* |  |  |  |  |  |  |
| >>Global eNB ID | M |  | 9.2.22 |  | YES | reject |
| **>>List of Served E-UTRA Cells** |  | *1 .. <maxCellineNB>* |  | Complete list of cells served by the eNB | YES | reject |
| >>>Served E-UTRA Cell Information | M |  | Served Cell Information 9.2.8 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours | – |  |
| >>Interface Instance Indication | O |  | 9.2.143 | NOTE: In the current version of this specification this IE is not included in the *Initiating Node Type* IE. | YES | reject |
| >>Cell and Capacity Assistance Information | O |  | 9.2.146 |  | YES | ignore |
| >*en-gNB* |  |  |  |  |  |  |
| >>Global en-gNB ID | M |  | 9.2.112 |  | YES | reject |
| **>>List of Served NR Cells** |  | *1 .. <maxCellinengNB>* |  | List of cells served by the en-gNB. If a partial list of cells is signalled, it contains at least one cell per carrier configured at the gNB. | YES | reject |
| >>>Served NR Cell Information | M |  | 9.2.110 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours. | – |  |
| >>>Enhanced Cell Assistance Information NR | O |  | Served Cell Specific Info Request  9.2.x |  | YES | ignore |
| >>Partial List Indicator | O |  | ENUMERATED (partial, ...) | Value “partial” indicates that a partial list of cells is included in the *List of Served NR Cells* IE | YES | ignore |
| Interface Instance Indication | O |  | 9.2.143 |  | YES | reject |
| TNL Transport Layer Address info | O |  | 9.2.149 |  | YES | ignore |

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

#### 9.1.2.34 EN-DC CONFIGURATION UPDATE

This message is sent by an initiating node to a peer neighbouring node, both nodes able to interact for EN-DC, to transfer updated information for a TNL association.

Direction: eNB → en-gNB, en-gNB → eNB.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| Message Type | M |  | 9.2.13 |  | YES | reject |
| CHOICE Initiating NodeType | M |  |  |  | YES | reject |
| >*eNB* |  |  |  |  |  |  |
| >>Cell Assistance Information | O |  | 9.2.115 |  | YES | reject |
| **>>Served E-UTRA Cells To Add** |  | *0 .. <maxCellineNB>* |  |  | GLOBAL | reject |
| >>>Served E-UTRA Cell Information | M |  | Served Cell Information 9.2.8 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours | – |  |
| **>>Served E-UTRA Cells To Modify** |  | *0 .. <maxCellineNB>* |  | Complete list of modified cells served by the eNB | GLOBAL | reject |
| >>>Old ECGI | M |  | ECGI  9.2.14 | Old E-UTRAN Cell Global Identifier | – |  |
| >>>Served E-UTRA Cell Information | M |  | Served Cell Information 9.2.8 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours | – |  |
| **>>Served E-UTRA Cells To Delete** |  | *0 .. <maxCellineNB>* |  | Complete list of deleted cells served by the eNB | GLOBAL | reject |
| >>>Old ECGI | M |  | ECGI  9.2.14 | Old E-UTRAN Cell Global Identifier of the cell to be deleted | - |  |
| >*en-gNB* |  |  |  |  |  |  |
| **>>Served NR Cells To Add** |  | *0 .. <maxCellinengNB>* |  |  | GLOBAL | reject |
| >>>Served NR Cell Information | M |  | 9.2.110 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours | – |  |
| >>>Enhanced Cell Assistance Information NR | O |  | Served Cell Specific Info Request  9.2.2.x |  | YES | ignore |
| **>>Served NR Cells To Modify** |  | *0 .. <maxCellinengNB>* |  |  | GLOBAL | reject |
| >>>Old NR-CGI | M |  | NR CGI  9.2.111 |  | - |  |
| >>>Served NR Cell Information | M |  | 9.2.110 |  | – |  |
| >>>NR Neighbour Information | O |  | 9.2.98 | NR neighbours | – |  |
| >>>NR Deactivation Indication | O |  | ENUMERATED(deactivated,  …) | Indicates that the concerned NR cell is switched off for energy saving reasons.  If this IE is not included, indicates that the concerned cell is activated. | YES | ignore |
| **>>Served NR Cells To Delete** |  | *0 .. <maxCellinengNB>* |  |  | GLOBAL | reject |
| >>>Old NR-CGI | M |  | NR CGI  9.2.111 |  | - |  |
| Interface Instance Indication | O |  | 9.2.143 |  | YES | reject |
| TNL Transport Layer Address info | O |  | 9.2.149 |  | YES | ignore |
| **TNLA To Add List** |  | *0..1* |  |  | YES | ignore |
| >**TNLA To Add Item IEs** |  | *1..<maxnoofTNLAssociations>* |  |  | – |  |
| >>TNLA Transport Layer Information | M |  | 9.2.150 | CP Transport Layer Information of the en-gNB | - | - |
| >>TNLA Usage | M |  | 9.2.151 |  | - | - |
| **TNLA To Update List** |  | *0..1* |  |  | YES | ignore |
| >**TNLA To Update Item IEs** |  | *1..<maxnoofTNLAssociations>* |  |  | – |  |
| >>TNLA Transport Layer Information | M |  | 9.2.150 | CP Transport Layer Information of the en-gNB | - | - |
| >>TNLA Usage | O |  | 9.2.151 |  | - | - |
| **TNLA To Remove List** |  | *0..1* |  |  | YES | ignore |
| >**TNLA To Remove Item IEs** |  | *1..<maxnoofTNLAssociations>* |  |  | – |  |
| >>TNLA Transport Layer Information | M |  | 9.2.150 | CP Transport Layer Information of the en-gNB | - | - |

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

#### 9.2.x Served Cell Specific Info Request

The *Served Cell Specific Info Request* IE is used by the NG-RAN node to request specific information about NR cells.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE Type and Reference | Semantics Description |
| **List of Requested NR Cells** |  | *1 .. < maxnoofCellsinNG-RAN node>* |  | List of NR cells. |
| >NR CGI | M |  | 9.2.111 | NR cell for which specific served NR cell information is requested. |
| Additional Measurement Timing Configuration List Request Indicator | O |  | ENUMERATED (AdditionalMTCListRequested, …) | Included when the NG-RAN node requests the *Additional Measurement Timing Configuration List* IE to be included in the *Served Cell Information NR* IE for the requested cells. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofCellsinNG-RAN node | Maximum no. cells that can be served by a NG-RAN node. Value is 16384. |

9.3.4 PDU Definitions

-- ASN1START

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

--

-- PDU definitions for X2AP.

--

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

X2AP-PDU-Contents {

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

eps-Access (21) modules (3) x2ap (2) version1 (1) x2ap-PDU-Contents (1) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

id-IABNodeIndication,

id-F1CTrafficContainer,

id-IntendedTDD-DL-ULConfiguration-NR,

id-UERadioCapability,

id-SFN-Offset,

id-ServedCellSpecificInfoReq-NR,

maxCellineNB,

maxnoofBearers,

maxnoofPDCP-SN,

maxFailedMeasObjects,

maxnoofCellIDforMDT,

maxnoofTAforMDT,

maxCellinengNB,

maxnoofCellIDforQMC,

maxnoofTAforQMC,

maxnoofPLMNforQMC,

maxnoofProtectedResourcePatterns,

maxnoNRcellsSpectrumSharingWithE-UTRA,

maxnoofNrCellBands,

maxnoofSSBAreas

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

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

--

-- EN-DC X2 SETUP REQUEST

--

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

ENDCX2SetupRequest ::= SEQUENCE {

protocolIEs ProtocolIE-Container {{ENDCX2SetupRequest-IEs}},

...

}

ENDCX2SetupRequest-IEs X2AP-PROTOCOL-IES ::= {

{ ID id-InitiatingNodeType-EndcX2Setup CRITICALITY reject TYPE InitiatingNodeType-EndcX2Setup PRESENCE mandatory}|

{ ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional}|

{ ID id-TNLConfigurationInfo CRITICALITY ignore TYPE TNLConfigurationInfo PRESENCE optional},

...

}

InitiatingNodeType-EndcX2Setup ::= CHOICE {

init-eNB ProtocolIE-Container {{ENB-ENDCX2SetupReqIEs}},

init-en-gNB  ProtocolIE-Container {{En-gNB-ENDCX2SetupReqIEs}},

...

}

ENB-ENDCX2SetupReqIEs X2AP-PROTOCOL-IES ::= {

{ ID id-GlobalENB-ID CRITICALITY reject TYPE GlobalENB-ID PRESENCE mandatory}|

{ ID id-ServedEUTRAcellsENDCX2ManagementList CRITICALITY reject TYPE ServedEUTRAcellsENDCX2ManagementList PRESENCE mandatory}|

{ ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional }|

-- NOTE: In the current version of this specification the *Interface Instance Indication* IE is not included in the *Initiating NodeType* IE --

{ ID id-CellandCapacityAssistInfo CRITICALITY ignore TYPE CellandCapacityAssistInfo PRESENCE optional },

...

}

ServedEUTRAcellsENDCX2ManagementList ::= SEQUENCE (SIZE (1.. maxCellineNB)) OF SEQUENCE {

servedEUTRACellInfo ServedCell-Information,

nrNeighbourInfo NRNeighbour-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServedEUTRAcellsENDCX2Management-ExtIEs} } OPTIONAL,

...

}

ServedEUTRAcellsENDCX2Management-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

...

}

En-gNB-ENDCX2SetupReqIEs X2AP-PROTOCOL-IES ::= {

{ ID id-Globalen-gNB-ID CRITICALITY reject TYPE GlobalGNB-ID PRESENCE mandatory}|

{ ID id-ServedNRcellsENDCX2ManagementList CRITICALITY reject TYPE ServedNRcellsENDCX2ManagementList PRESENCE mandatory}|

{ ID id-PartialListIndicator CRITICALITY ignore TYPE PartialListIndicator PRESENCE optional },

...

}

ServedNRcellsENDCX2ManagementList ::= SEQUENCE (SIZE (1.. maxCellinengNB)) OF SEQUENCE {

servedNRCellInfo ServedNRCell-Information,

nRNeighbourInfo NRNeighbour-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {En-gNBServedCells-ExtIEs} } OPTIONAL,

...

}

En-gNBServedCells-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

{ ID id-servedCellSpecificInfoReq-NR CRITICALITY ignore TYPE ServedCellSpecificInfoReq-NR PRESENCE optional },

...

}

ServedNRCell-Information ::= SEQUENCE {

nrpCI NRPCI,

nrCellID NRCGI,

fiveGS-TAC FiveGS-TAC OPTIONAL,

configured-TAC TAC OPTIONAL,

broadcastPLMNs BroadcastPLMNs-Item,

nrModeInfo CHOICE {

fdd FDD-InfoServedNRCell-Information,

tdd TDD-InfoServedNRCell-Information,

...

},

measurementTimingConfiguration OCTET STRING,

iE-Extensions ProtocolExtensionContainer { {ServedNRCell-Information-ExtIEs} } OPTIONAL,

...

}

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

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

--

-- EN-DC CONFIGURATION UPDATE

--

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

ENDCConfigurationUpdate ::= SEQUENCE {

protocolIEs ProtocolIE-Container {{ENDCConfigurationUpdate-IEs}},

...

}

ENDCConfigurationUpdate-IEs X2AP-PROTOCOL-IES ::= {

{ ID id-InitiatingNodeType-EndcConfigUpdate CRITICALITY reject TYPE InitiatingNodeType-EndcConfigUpdate PRESENCE mandatory}|

{ ID id-InterfaceInstanceIndication CRITICALITY reject TYPE InterfaceInstanceIndication PRESENCE optional}|

{ ID id-TNLConfigurationInfo CRITICALITY ignore TYPE TNLConfigurationInfo PRESENCE optional }|

{ ID id-TNLA-To-Add-List CRITICALITY ignore TYPE TNLA-To-Add-List PRESENCE optional }|

{ ID id-TNLA-To-Update-List CRITICALITY ignore TYPE TNLA-To-Update-List PRESENCE optional }|

{ ID id-TNLA-To-Remove-List CRITICALITY ignore TYPE TNLA-To-Remove-List PRESENCE optional },

...

}

InitiatingNodeType-EndcConfigUpdate::= CHOICE {

init-eNB ProtocolIE-Container {{ENB-ENDCConfigUpdateIEs}},

init-en-gNB ProtocolIE-Container {{En-gNB-ENDCConfigUpdateIEs}},

...

}

ENB-ENDCConfigUpdateIEs X2AP-PROTOCOL-IES ::= {

{ ID id-CellAssistanceInformation CRITICALITY reject TYPE CellAssistanceInformation PRESENCE optional }|

{ ID id-ServedEUTRAcellsENDCX2ManagementList CRITICALITY reject TYPE ServedEUTRAcellsENDCX2ManagementList PRESENCE optional }|

{ ID id-ServedEUTRAcellsToModifyListENDCConfUpd CRITICALITY reject TYPE ServedEUTRAcellsToModifyListENDCConfUpd PRESENCE optional }|

{ ID id-ServedEUTRAcellsToDeleteListENDCConfUpd CRITICALITY reject TYPE ServedEUTRAcellsToDeleteListENDCConfUpd PRESENCE optional },

...

}

ServedEUTRAcellsToModifyListENDCConfUpd ::= SEQUENCE (SIZE (1.. maxCellineNB)) OF SEQUENCE {

old-ECGI ECGI,

servedEUTRACellInfo ServedCell-Information,

nrNeighbourInfo NRNeighbour-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServedEUTRAcellsToModifyListENDCConfUpd-ExtIEs} } OPTIONAL,

...

}

ServedEUTRAcellsToModifyListENDCConfUpd-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

...

}

ServedEUTRAcellsToDeleteListENDCConfUpd ::= SEQUENCE (SIZE (1..maxCellineNB)) OF ECGI

En-gNB-ENDCConfigUpdateIEs X2AP-PROTOCOL-IES ::= {

{ ID id-ServedNRcellsENDCX2ManagementList CRITICALITY reject TYPE ServedNRcellsENDCX2ManagementList PRESENCE optional }|

{ ID id-ServedNRcellsToModifyListENDCConfUpd CRITICALITY reject TYPE ServedNRcellsToModifyENDCConfUpdList PRESENCE optional }|

{ ID id-ServedNRcellsToDeleteListENDCConfUpd CRITICALITY reject TYPE ServedNRcellsToDeleteENDCConfUpdList PRESENCE optional },

...

}

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

### 9.3.5 Information Element definitions

-- ASN1START

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

--

-- Information Element Definitions

--

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

X2AP-IEs {

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

eps-Access (21) modules (3) x2ap (2) version1 (1) x2ap-IEs (2) }

DEFINITIONS AUTOMATIC TAGS ::=

BEGIN

IMPORTS

id-E-RAB-Item,

id-Number-of-Antennaports,

id-MBSFN-Subframe-Info,

id-PRACH-Configuration,

id-CSG-Id,

id-MDTConfiguration,

id-SignallingBasedMDTPLMNList,

id-MultibandInfoList,

id-FreqBandIndicatorPriority,

id-NeighbourTAC,

id-Time-UE-StayedInCell-EnhancedGranularity,

id-MBMS-Service-Area-List,

id-HO-cause,

id-eARFCNExtension,

id-DL-EARFCNExtension,

id-UL-EARFCNExtension,

id-M3Configuration,

id-M4Configuration,

id-M5Configuration,

id-MDT-Location-Info,

id-NRrestrictioninEPSasSecondaryRAT,

id-NRrestrictionin5GS,

id-AdditionalSpecialSubframe-Info,

id-UEID,

id-enhancedRNTP,

id-ProSeUEtoNetworkRelaying,

id-M6Configuration,

id-M7Configuration,

id-OffsetOfNbiotChannelNumberToDL-EARFCN,

id-OffsetOfNbiotChannelNumberToUL-EARFCN,

id-AdditionalSpecialSubframeExtension-Info,

id-BandwidthReducedSI,

id-extended-e-RAB-MaximumBitrateDL,

id-extended-e-RAB-MaximumBitrateUL,

id-extended-e-RAB-GuaranteedBitrateDL,

id-extended-e-RAB-GuaranteedBitrateUL,

id-extended-uEaggregateMaximumBitRateDownlink,

id-extended-uEaggregateMaximumBitRateUplink,

id-E-RABUsageReport-Item,

id-SecondaryRATUsageReport-Item,

id-UEAppLayerMeasConfig,

id-DL-scheduling-PDCCH-CCE-usage,

id-UL-scheduling-PDCCH-CCE-usage,

id-DownlinkPacketLossRate,

id-UplinkPacketLossRate,

id-serviceType,

id-ProtectedEUTRAResourceIndication,

id-NRS-NSSS-PowerOffset,

id-NSSS-NumOccasionDifferentPrecoder,

id-CNTypeRestrictions,

id-BluetoothMeasurementConfiguration,

id-WLANMeasurementConfiguration,

id-ECGI,

id-NRCGI,

id-MeNBCoordinationAssistanceInformation,

id-SgNBCoordinationAssistanceInformation,

id-NRNeighbourInfoToAdd,

id-LastNG-RANPLMNIdentity,

id-BPLMN-ID-Info-EUTRA,

id-NBIoT-UL-DL-AlignmentOffset,

id-UnlicensedSpectrumRestriction,

id-CarrierList,

id-FrequencyShift7p5khz,

id-NPRACHConfiguration,

id-MDTConfigurationNR,

id-CSI-RSTransmissionIndication,

id-QoS-Mapping-Information,

id-IntendedTDD-DL-ULConfiguration-NR,

id-TraceCollectionEntityURI,

id-SFN-Offset,

id-ServedCellSpecificInfoReq-NR,

maxnoofBearers,

maxCellineNB,

maxEARFCN,

maxEARFCNPlusOne,

newmaxEARFCN,

maxInterfaces,

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

-- A

ABSInformation ::= CHOICE {

fdd ABSInformationFDD,

tdd ABSInformationTDD,

abs-inactive NULL,

...

}

ABSInformationFDD ::= SEQUENCE {

abs-pattern-info BIT STRING (SIZE(40)),

numberOfCellSpecificAntennaPorts ENUMERATED {one, two, four, ...},

measurement-subset BIT STRING (SIZE(40)),

iE-Extensions ProtocolExtensionContainer { {ABSInformationFDD-ExtIEs} } OPTIONAL,

...

}

ABSInformationFDD-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

...

}

ABSInformationTDD ::= SEQUENCE {

abs-pattern-info BIT STRING (SIZE(1..70, ...)),

numberOfCellSpecificAntennaPorts ENUMERATED {one, two, four, ...},

measurement-subset BIT STRING (SIZE(1..70, ...)),

iE-Extensions ProtocolExtensionContainer { {ABSInformationTDD-ExtIEs} } OPTIONAL,

...

}

ABSInformationTDD-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

...

}

ABS-Status ::= SEQUENCE {

dL-ABS-status DL-ABS-status,

usableABSInformation UsableABSInformation,

iE-Extensions ProtocolExtensionContainer { {ABS-Status-ExtIEs} } OPTIONAL,

...

}

ABS-Status-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

...

}

ActivationID ::= INTEGER (0..255)

AdditionalMTCListRequestIndicator ::= ENUMERATED {AdditionalMTCListRequested, ...}

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Next Change>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>

-- S

<<< skip unchanged ASN.1 >>>

ServedCells ::= SEQUENCE (SIZE (1.. maxCellineNB)) OF SEQUENCE {

servedCellInfo ServedCell-Information,

neighbour-Info Neighbour-Information OPTIONAL,

iE-Extensions ProtocolExtensionContainer { {ServedCell-ExtIEs} } OPTIONAL,

...

}

ServedCell-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

{ ID id-NRNeighbourInfoToAdd CRITICALITY ignore EXTENSION NRNeighbour-Information PRESENCE optional },

{ ID id-servedCellSpecificInfoReq-NR CRITICALITY ignore TYPE ServedCellSpecificInfoReq-NR PRESENCE optional },

...

}

ServedCell-Information ::= SEQUENCE {

pCI PCI,

cellId ECGI,

tAC TAC,

broadcastPLMNs BroadcastPLMNs-Item,

eUTRA-Mode-Info EUTRA-Mode-Info,

iE-Extensions ProtocolExtensionContainer { {ServedCell-Information-ExtIEs} } OPTIONAL,

...

}

ServedCell-Information-ExtIEs X2AP-PROTOCOL-EXTENSION ::= {

{ ID id-Number-of-Antennaports CRITICALITY ignore EXTENSION Number-of-Antennaports PRESENCE optional}|

{ ID id-PRACH-Configuration CRITICALITY ignore EXTENSION PRACH-Configuration PRESENCE optional}|

{ ID id-MBSFN-Subframe-Info CRITICALITY ignore EXTENSION MBSFN-Subframe-Infolist PRESENCE optional}|

{ ID id-CSG-Id CRITICALITY ignore EXTENSION CSG-Id PRESENCE optional}|

{ ID id-MBMS-Service-Area-List CRITICALITY ignore EXTENSION MBMS-Service-Area-Identity-List PRESENCE optional}|

{ ID id-MultibandInfoList CRITICALITY ignore EXTENSION MultibandInfoList PRESENCE optional}|

{ ID id-FreqBandIndicatorPriority CRITICALITY ignore EXTENSION FreqBandIndicatorPriority PRESENCE optional}|

{ ID id-BandwidthReducedSI CRITICALITY ignore EXTENSION BandwidthReducedSI PRESENCE optional}|

{ ID id-ProtectedEUTRAResourceIndication CRITICALITY ignore EXTENSION ProtectedEUTRAResourceIndication PRESENCE optional}|

{ ID id-BPLMN-ID-Info-EUTRA CRITICALITY ignore EXTENSION BPLMN-ID-Info-EUTRA PRESENCE optional}|

{ ID id-NPRACHConfiguration CRITICALITY ignore EXTENSION NPRACHConfiguration PRESENCE optional}|

{ ID id-SFN-Offset CRITICALITY ignore EXTENSION SFN-Offset PRESENCE optional},

...

}

ServedCellSpecificInfoReq-NR ::= SEQUENCE {

requestedNRCells-List SEQUENCE (SIZE(1..maxnoofCellsinNG-RANnode)) OF NR-CGI,

additionalMTCListRequestIndicator AdditionalMTCListRequestIndicator OPTIONAL,

iE-Extensions ProtocolExtensionContainer { { ServedCellSpecificInfoReq-NR-ExtIEs} } OPTIONAL,

...

}

CellAssistanceInfo-NR-ExtIEs XNAP-PROTOCOL-IES ::= {

...

}

<<< skip unchanged ASN.1 >>>

id-CellMeasurementResult-E-UTRA-ENDC ProtocolIE-ID ::= 401

id-CellMeasurementResult-E-UTRA-ENDC-Item ProtocolIE-ID ::= 402

id-CellToReport-E-UTRA-ENDC ProtocolIE-ID ::= 403

id-CellToReport-E-UTRA-ENDC-Item ProtocolIE-ID ::= 404

id-TraceCollectionEntityURI ProtocolIE-ID ::= 405

id-SFN-Offset ProtocolIE-ID ::= 406

id-CHO-DC-EarlyDataForwarding ProtocolIE-ID ::= 407

id-IMSvoiceEPSfallbackfrom5G ProtocolIE-ID ::= 408

ID id-servedCellSpecificInfoReq-NR ProtocolIE-ID ::= xxx

END

-- ASN1STOP

>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>Changes End>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>