**3GPP TSG-RAN WG3 Meeting #116-e R3-223805**

**E-meeting, 09 May - 19 May 2022**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **38.473** | **CR** | **0927** | **rev** | **1** | **Current version:** | **17.0.0** |  |
|  |
| *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:***  | Supporting network slice AS group |
|  |  |
| ***Source to WG:*** | Huawei, LG Electronics, CATT, CMCC |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_slice-Core |  | ***Date:*** | 2022-05-09 |
|  |  |  |  |  |
| ***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 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:*** | SA2 has agreed set of CRs to support Network Slice AS Groups (NSAGs) for slice aware cell reselection/RACH in S2-2203618 and S2-2203619. This CR contains the related protocol changes of the NSAGs.   |
|  |  |
| ***Summary of change:*** |  Add the *TAI NSAG Support List* IE in F1 setup request and gNB-DU configuration update messages.  |
|  |  |
| ***Consequences if not approved:*** | The Network Slice AS Group is not supported by RAN. Not aligned with SA2 specifications.  |
|  |  |
| ***Clauses affected:*** | 8.2.3.2, 8.2.4.2, 9.3.1.10, 9.3.1.aaa, 9.4.5, 9.4.7. |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **x** |  |  Other core specifications  | TS38.413 CR0785 |
| ***affected:*** |  | **x** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **x** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | Rev0: R3-223467Rev1: R3-223805 Update based on online comments.  |

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| **Change Begins** |

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in TR 21.905 [1] and the following apply.
An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in TR 21.905 [1].

5GC 5G Core Network

5QI 5G QoS Identifier

AMF Access and Mobility Management Function

ARP Antenna Reference Point

ARPI Additional RRM Policy Index

BH Backhaul

CAG Closed Access Group

CN Core Network

CG Cell Group

CG-SDT Configured Grant-Small Data Transmission

CGI Cell Global Identifier

CHO Conditional Handover

CP Control Plane

CPA Conditional PSCell Addition

CPC Conditional PSCell Change

DAPS Dual Active Protocol Stack

DL Downlink

DL-PRS Downlink Positioning Reference Signal

EN-DC E-UTRA-NR Dual Connectivity

EPC Evolved Packet Core

FSA ID MBS Frequency Selection Area (FSA) ID

IAB Integrated Access and Backhaul

IMEISV International Mobile station Equipment Identity and Software Version number

LMF Location Management Function

MBS Multicast/Broadcast Service

NID Network Identifier

NPN Non-Public Network

NSAG Network Slice AS Group

NSSAI Network Slice Selection Assistance Information

PDC Propagation Delay Compensation

PEIPS Paging Early Indication with Paging Subgrouping

posSIB Positioning SIB

PNI-NPN Public Network Integrated NPN

PTP Point to Point

PTM Point to Multipoint

QoE Quality of Experience

RANAC RAN Area Code

RedCap Reduced Capability

RIM Remote Interference Management

RIM-RS RIM Reference Signal

RRC Radio Resource Control

RSRP Reference Signal Received Power

SDT Small Data Transmission

SNPN Stand-alone Non-Public Network

S-NSSAI Single Network Slice Selection Assistance Information

SUL Supplementary Uplink

TAC Tracking Area Code

TAI Tracking Area Identity

TEG Timing Error Group

TRP Transmission-Reception Point

UL-AoA Uplink Angle of Arrival

UL-RTOA Uplink Relative Time of Arrival

UL-SRS Uplink Sounding Reference Signal

Z-AoA Zenith Angles of Arrival

**<Unchanged Text Omitted>**

### 8.2.3 F1 Setup

#### 8.2.3.1 General

The purpose of the F1 Setup procedure is to exchange application level data needed for the gNB-DU and the gNB-CU to correctly interoperate on the F1 interface. This procedure shall be the first F1AP procedure triggered for the F1-C interface instance after a TNL association has become operational.

NOTE: If F1-C signalling transport is shared among multiple F1-C interface instances, one F1 Setup procedure is issued per F1-C interface instance to be setup, i.e. several F1 Setup procedures may be issued via the same TNL association after that TNL association has become operational.

NOTE: Exchange of application level configuration data also applies between the gNB-DU and the gNB-CU in case the DU does not broadcast system information other than for radio frame timing and SFN, as specified in the TS 37.340 [8]. How to use this information when this option is used is not explicitly specified.

The procedure uses non-UE associated signalling.

This procedure erases any existing application level configuration data in the two nodes and replaces it by the one received. This procedure also re-initialises the F1AP UE-related contexts (if any) and erases all related signalling connections in the two nodes like a Reset procedure would do.

#### 8.2.3.2 Successful Operation



Figure 8.2.3.2-1: F1 Setup procedure: Successful Operation

**<Unchanged Text Omitted>**

If the *NR Cell PRACH Configuration* IE is included in the *Served Cell Information* IE contained in the F1 SETUP REQUEST message, the gNB-CU may store the information, and forward it to other RAN nodes for RACH optimisation.

If the *RedCap Broadcast Information* IE is included in the *Served Cell Information* IE in the F1 SETUP REQUEST message, the gNB-CU may use this information to determine a suitable target in case of subsequent outgoing mobility involving RedCap UEs.

If the *TAI NSAG Support List* IE is included in the *Served Cell Information* IE in the F1 SETUP REQUEST message, the gNB-CU shall, if supported, use this information as specified in TS 23.501 [21].

**<Unchanged Text Omitted>**

### 8.2.4 gNB-DU Configuration Update

#### 8.2.4.1 General

The purpose of the gNB-DU Configuration Update procedure is to update application level configuration data needed for the gNB-DU and the gNB-CU to interoperate correctly on the F1 interface. This procedure does not affect existing UE-related contexts, if any. The procedure uses non-UE associated signalling.

NOTE: Update of application level configuration data also applies between the gNB-DU and the gNB-CU in case the DU does not broadcast system information other than for radio frame timing and SFN, as specified in the TS 37.340 [8]. How to use this information when this option is used is not explicitly specified.

#### 8.2.4.2 Successful Operation



Figure 8.2.4.2-1: gNB-DU Configuration Update procedure: Successful Operation

**<Unchanged Text Omitted>**

If the *Cells for SON* IE is present in the GNB-DU CONFIGURATION UPDATE ACKNOWLEDGE message, the gNB-DU may store or update this information and behaves as follows:

- For each served cell indicated by the *NR CGI* IE included within the *Cells for SON Item* IE, the gNB-DU may adjust the PRACH configuration of this served cell.

- If the *Neighbour NR Cells for SON List* IE is present in the *Cells for SON Item* IE, the gNB-DU may take the PRACH configuration of neighbour cells included in the *Neighbour NR Cells for SON List* IE into consideration when adjusting the PRACH configuration of the served cell.

If the *RedCap Broadcast Information* IE is contained in the *Served Cell Information* IE in the GNB-DU CONFIGURATION UPDATE message, the gNB-CU may use this information to determine a suitable target in case of subsequent outgoing mobility involving RedCap UEs.

If the *TAI NSAG Support List* IE is included in the *Served Cell Information* IE in the GNB-DU CONFIGURATION UPDATE message, the gNB-CU shall, if supported, use this information as specified in TS 23.501 [21].

**<Unchanged Text Omitted>**

#### 9.3.1.10 Served Cell Information

This IE contains cell configuration information of a cell in the gNB-DU.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **IE/Group Name** | **Presence** | **Range** | **IE type and reference** | **Semantics description** | **Criticality** | **Assigned Criticality** |
| NR CGI | M |  | 9.3.1.12 |  | - |  |
| NR PCI | M |  | INTEGER (0..1007) | Physical Cell ID | - |  |
| 5GS TAC | O |  | 9.3.1.29 | 5GS Tracking Area Code | - |  |
| Configured EPS TAC | O |  | 9.3.1.29a |  | - |  |
| **Served PLMNs** |  | *1..<maxnoofBPLMNs>* |  | Broadcast PLMNs in SIB 1 associated to the NR Cell Identity in the *NR CGI* IE | - |  |
| >PLMN Identity | M |  | 9.3.1.14 |  | - |  |
| >TAI Slice Support List | O |  | Slice Support List9.3.1.37 | Supported S-NSSAIs per PLMN or per SNPN.  | YES | ignore |
| >NPN Support Information | O |  | 9.3.1.156 | Supported NPNs per PLMN. | YES | reject |
| >Extended TAI Slice Support List | O |  | Extended Slice Support List9.3.1.165 | Additional Supported S-NSSAIs per PLMN or per SNPN.  | YES | reject |
| >TAI NSAG Support List | O |  | 9.3.1.aaa | NSAG information associated with the slices per TAC, per PLMN or per SNPN. | YES | ignore |
| CHOICE *NR-Mode-Info*  | M |  |  |  | - |  |
| *>FDD* |  |  |  |  | - |  |
| **>>FDD Info** |  | *1* |  |  | - |  |
| >>>UL FreqInfo | M |  | NR Frequency Info9.3.1.17 | This IE is ignored if the *Cell Direction* IE is included and set to “dl-only”. | - |  |
| >>>DL FreqInfo | M |  | NR Frequency Info9.3.1.17 | This IE is ignored if the *Cell Direction* IE is included and set to “ul-only”. | - |  |
| >>>UL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 | This IE is ignored if the *Cell Direction* IE is included and set to “dl-only”. | - |  |
| >>>DL Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 | This IE is ignored if the *Cell Direction* IE is included and set to “ul-only”. | - |  |
| >>>UL Carrier List  | O |  | NR Carrier List9.3.1.137 | If included, the *UL Transmission Bandwidth* IE shall be ignored. | YES | ignore |
| >>>DL Carrier List | O |  | NR Carrier List9.3.1.137 | If included, the *DL Transmission Bandwidth* IE shall be ignored. | YES | ignore |
| *>TDD* |  |  |  |  | - |  |
| **>>TDD Info** |  | *1* |  |  | - |  |
| >>>NR FreqInfo | M |  | NR Frequency Info9.3.1.17 |  | - |  |
| >>>Transmission Bandwidth | M |  | Transmission Bandwidth9.3.1.15 |  | - |  |
| >>>Intended TDD DL-UL Configuration | O |  | 9.3.1.89 |  |  YES | ignore |
| >>>TDD UL-DL Configuration Common NR | O |  | OCTET STRING | The *tdd-UL-DL-ConfigurationCommon* as defined in TS 38.331 [8] | YES | ignore |
| >>>Carrier List | O |  | NR Carrier List9.3.1.137 | If included, the Transmission Bandwidth IE shall be ignored. | YES | ignore |
| >NR-U |  |  |  |  | YES | ignore |
| >>NR-U Channel Info List |  | *1..< maxnoofNR-UChannelIDs>* |  |  | - |  |
| >>>NR-U Channel Info Item |  |  |  |  | - |  |
| >>>>NR-U Channel ID | M |  | INTEGER (1.. maxnoofNR-UChannelIDs, …) | Index to uniquely identify the part of the NR-U Channel Bandwidth consisting of a contiguous set of resource blocks (RBs) on which a channel access procedure is performed in shared spectrum.Value 1 represents the first part of the NR-U Channel Bandwidth on which a channel access procedure is performed. Value 2 represents the second part of the NR-U Channel Bandwidth on which a channel access procedure is performed, and so on. | - |  |
| >>>>NR-U ARFCN | M |  | INTEGER (0.. maxNRARFCN) | It represents the centre frequency of the NR-U Channel Bandwidth. Only values specified in TS 38.101-1 [26] for NR shared spectrum are valid. | - |  |
| >>>>NR-U Channel Bandwidth | M |  | ENUMERATED (10MHz, 20MHz, 40MHz, 60 MHz, 80 MHz,. …) |  | - |  |
| Measurement Timing Configuration | M |  | OCTET STRING | Contains the *MeasurementTimingConfiguration* inter-node message defined in TS 38.331 [8]. | - |  |
| RANAC | O |  | RAN Area Code9.3.1.57 |  | YES | ignore |
| **Extended Served PLMNs List** |  | *0..1* |  | This is included if more than 6 Served PLMNs is to be signalled. | YES | ignore |
| **>Extended Served PLMNs Item** |  | *1 ..<maxnoofExtendedBPLMNs>* |  |  | - |  |
| >>PLMN Identity | M |  | 9.3.1.14 |  | - |  |
| >>TAI Slice Support List | O |  | Slice Support List9.3.1.37 | Supported S-NSSAIs per PLMN or per SNPN.  | - |  |
| >>NPN Support Information | O |  | 9.3.1.156 | Supported NPNs per PLMN. | YES | reject |
| >>Extended TAI Slice Support List | O |  | Extended Slice Support List9.3.1.165 | Additional Supported S-NSSAIs per PLMN or per SNPN.  | YES | reject |
| >TAI NSAG Support List | O |  | 9.3.1.aaa | NSAG information associated with the slices per TAC, per PLMN or per SNPN. | YES | ignore |
| Cell Direction | O |  | 9.3.1.78 |  | YES | ignore |
| **Broadcast PLMN Identity Info List** |  | *0..<maxnoofBPLMNsNR>* |  | This IE corresponds to the *PLMN-IdentityInfoList* IE and the *NPN-IdentityInfoList* IE (if available) in *SIB1* as specified in TS 38.331 [8]. All PLMN Identities and associated information contained in the *PLMN-IdentityInfoList* IE and NPN identities and associated information contained in the *NPN-IdentityInfoList* IE (if available) are included and provided in the same order as broadcast in SIB1.NOTE: In case of NPN-only cell, the PLMN Identities and associated information contained in the *PLMN-IdentityInfoList* IE are not included. | YES | ignore |
| Cell Type  | O |  | 9.3.1.87 |  | YES | ignore |
| >PLMN Identity List | M |  | Available PLMN List9.3.1.65 | Broadcast PLMN IDs in SIB1 associated to the *NR Cell Identity* IE | - |  |
| >Extended PLMN Identity List | O |  | Extended Available PLMN List9.3.1.76 |  | - |  |
| >5GS-TAC | O |  | OCTET STRING (3) |  | - |  |
| >NR Cell Identity | M |  | BIT STRING (36) |  | - |  |
| >RANAC | O |  | RAN Area Code9.3.1.57 |  | - |  |
| >Configured TAC Indication | O |  | 9.3.1.87a | NOTE: This IE is associated with the 5GS TAC in the *Broadcast PLMN Identity Info List* IE | YES | ignore |
| >NPN Broadcast Information | O |  | 9.3.1.157 | If this IE is included the content of the *PLMN Identity List* IE and *Extended PLMN Identity List* IE if present in the *Broadcast PLMN Identity Info List* IE is ignored. | YES | reject |
| Configured TAC Indication | O |  | 9.3.1.87a | NOTE: This IE is associated with the 5GS TAC on top-level of the *Served Cell Information* IE | YES | ignore |
| Aggressor gNB Set ID | O |  | 9.3.1.93 | This IE indicates the associated aggressor gNB Set ID of the cell | YES | ignore |
| Victim gNB Set ID | O |  | 9.3.1.93 | This IE indicates the associated Victim gNB Set ID of the cell | YES | ignore |
| IAB Info IAB-DU | O |  | 9.3.1.106 |  | YES | ignore |
| SSB Positions In Burst  | O |  | 9.3.1.138 |  | YES | ignore |
| NR PRACH Configuration | O |  | 9.3.1.139 |  | YES | ignore |
| SFN Offset | O |  | 9.3.1.208 |  | YES | ignore |
| NPN Broadcast Information | O |  | 9.3.1.157 |  | YES | reject |
| Supported MBS FSA ID List |  | *0..<maxnoofMBSFSAs>* |  | Shall contain all MBS Frequency Selection Area Identities associated with the NR CGI. | YES | ignore |
| >MBS Frequency Selection Area Identity | M |  | OCTET STRING(3) |  | – |  |
| RedCap Broadcast Information | O |  | BIT STRING (SIZE(8))  | The presence of this IE indicates that the intraFreqReselectionRedCap IE is broadcast in SIB1 of the corresponding cell, see TS 38.331 [8].Each position in the bitmap indicates which RedCap UEs are allowed access, according to the setting of RedCap barring indicators in SIB1, see TS 38.331 [8].First bit = 1Rx, second bit = 2Rx, other bits reserved for future use. Value '1' indicates 'access allowed'. Value '0' indicates 'access not allowed”. | YES | ignore |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofBPLMNs | Maximum no. of Broadcast PLMN Ids. Value is 6. |
| maxnoofExtendedBPLMNs | Maximum no. of Extended Broadcast PLMN Ids. Value is 6. |
| maxnoofBPLMNsNR | Maximum no. of PLMN Ids.broadcast in an NR cell. Value is 12. |
| maxnoofNR-UChannelIDs | Maximum no. NR-U Channel IDs in a cell. Value is 4. |
| maxnoofMBSFSAs | Maximum no. of MBS FSAs by a cell. Value is 256. |

**<Unchanged Text Omitted>**

#### 9.3.1.aaa TAI NSAG Support List

This IE indicates the list of NSAGs configured at the gNB-DU and their associated S-NSSAIs as defined in TS 23.501 [21].

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| IE/Group Name | Presence | Range | IE type and reference | Semantics description |
| **NSAG Support Item** |  | *1..<maxnoofNSAGs>* |  |  |
| >NSAG ID | M |  | INTEGER (0.. 255, …) |  |
| >NSAG Slice Support List | M |  | Extended Slice Support List9.3.1.165 | Indicates the list of slices which belong to the NSAG. |

|  |  |
| --- | --- |
| Range bound | Explanation |
| maxnoofNSAGs | Maximum no. of signalled NSAGs. Value is 256. |

### 9.4.5 Information Element Definitions

-- ASN1START

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-- Information Element Definitions

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

**<Unchanged Text Omitted>**

 id-DRBMappingInfo,

 id-LastUsedCellIndication,

 id-SIB17-message,

 id-MUSIM-GapConfig,

 id-TAINSAGSupportList,

 maxNRARFCN,

 maxnoofErrors,

**<Unchanged Text Omitted>**

 axnoofQoEInformation,

 maxnoofUuRLCChannels,

 maxnoofPC5RLCChannels,

 maxnoofSMBRValues,

 maxnoofNSAGs

**<Unchanged Text Omitted>**

BPLMN-ID-Info-List ::= SEQUENCE (SIZE(1..maxnoofBPLMNsNR)) OF BPLMN-ID-Info-Item

BPLMN-ID-Info-Item ::= SEQUENCE {

 pLMN-Identity-List AvailablePLMNList,

 extended-PLMN-Identity-List ExtendedAvailablePLMN-List OPTIONAL,

 fiveGS-TAC FiveGS-TAC OPTIONAL,

 nr-cell-ID NRCellIdentity,

 ranac RANAC OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { BPLMN-ID-Info-ItemExtIEs} } OPTIONAL,

 ...

}

BPLMN-ID-Info-ItemExtIEs F1AP-PROTOCOL-EXTENSION ::= {

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

 { ID id-NPNBroadcastInformation CRITICALITY reject EXTENSION NPNBroadcastInformation PRESENCE optional},

 ...

}

ServedPLMNs-List ::= SEQUENCE (SIZE(1..maxnoofBPLMNs)) OF ServedPLMNs-Item

ServedPLMNs-Item ::= SEQUENCE {

 pLMN-Identity PLMN-Identity,

 iE-Extensions ProtocolExtensionContainer { { ServedPLMNs-ItemExtIEs} } OPTIONAL,

 ...

}

ServedPLMNs-ItemExtIEs F1AP-PROTOCOL-EXTENSION ::= {

{ ID id-TAISliceSupportList CRITICALITY ignore EXTENSION SliceSupportList PRESENCE optional }|

{ ID id-NPNSupportInfo CRITICALITY reject EXTENSION NPNSupportInfo PRESENCE optional }|

{ ID id-ExtendedTAISliceSupportList CRITICALITY reject EXTENSION ExtendedSliceSupportList PRESENCE optional }|

{ ID id-TAINSAGSupportList CRITICALITY ignore EXTENSION TAINSAGSupportList PRESENCE optional},

 ...

}

**<Unchanged Text Omitted>**

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

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

 ...

}

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

ExtendedServedPLMNs-Item ::= SEQUENCE {

 pLMN-Identity PLMN-Identity,

 tAISliceSupportList SliceSupportList OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { { ExtendedServedPLMNs-ItemExtIEs} } OPTIONAL,

 ...

}

ExtendedServedPLMNs-ItemExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 { ID id-NPNSupportInfo CRITICALITY reject EXTENSION NPNSupportInfo PRESENCE optional }|

{ ID id-ExtendedTAISliceSupportList CRITICALITY reject EXTENSION ExtendedSliceSupportList PRESENCE optional }|

{ ID id-TAINSAGSupportList CRITICALITY ignore EXTENSION TAINSAGSupportList PRESENCE optional},

 ...

}

ExtendedSliceSupportList ::= SEQUENCE (SIZE(1.. maxnoofExtSliceItems)) OF SliceSupportItem

**<Unchanged Text Omitted>**

FiveGS-TAC ::= OCTET STRING (SIZE(3))

Configured-EPS-TAC ::= OCTET STRING (SIZE(2))

TargetCellList ::= SEQUENCE (SIZE(1..maxnoofCHOcells)) OF TargetCellList-Item

TargetCellList-Item ::= SEQUENCE {

 target-cell NRCGI,

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

}

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

 ...

}

TAINSAGSupportList ::= SEQUENCE (SIZE(1.. maxnoofNSAGs)) OF NSAGSupportItem

NSAGSupportItem ::= SEQUENCE {

 nSAG-ID NSAG-ID,

 nSAGSliceSupport ExtendedSliceSupportList,

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

 ...

}

NSAGSupportItem-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

NSAG-ID ::= INTEGER (0..255, ...)

TDD-Info ::= SEQUENCE {

 nRFreqInfo NRFreqInfo,

 transmission-Bandwidth Transmission-Bandwidth,

 iE-Extensions ProtocolExtensionContainer { {TDD-Info-ExtIEs} } OPTIONAL,

 ...

}

TDD-Info-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 {ID id-IntendedTDD-DL-ULConfig CRITICALITY ignore EXTENSION IntendedTDD-DL-ULConfig PRESENCE optional}|

 {ID id-TDD-UL-DLConfigCommonNR CRITICALITY ignore EXTENSION TDD-UL-DLConfigCommonNR PRESENCE optional }|

 {ID id-CarrierList CRITICALITY ignore EXTENSION NRCarrierList PRESENCE optional },

 ...

}

TDD-InfoRel16 ::= SEQUENCE {

 tDD-FreqInfo FreqInfoRel16 OPTIONAL,

 sUL-FreqInfo FreqInfoRel16 OPTIONAL,

 tDD-UL-DLConfigCommonNR TDD-UL-DLConfigCommonNR OPTIONAL,

 iE-Extensions ProtocolExtensionContainer { {TDD-InfoRel16-ExtIEs} } OPTIONAL,

 ...

}

TDD-InfoRel16-ExtIEs F1AP-PROTOCOL-EXTENSION ::= {

 ...

}

TDD-UL-DLConfigCommonNR ::= OCTET STRING

**<Unchanged Text Omitted>**

### 9.4.7 Constant Definitions

-- ASN1START

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

--

-- Constant definitions

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

**<Unchanged Text Omitted>**

maxnoofQoEInformation INTEGER ::= 16

maxnoofUuRLCChannels INTEGER ::= 32

maxnoofPC5RLCChannels INTEGER ::= 64

maxnoofSMBRValues INTEGER ::= 8

maxnoofNSAGs INTEGER ::= 256

**<Unchanged Text Omitted>**

id-PEIPSAssistanceInfo ProtocolIE-ID ::= 622

id-UEPagingCapability ProtocolIE-ID ::= 623

id-LastUsedCellIndication ProtocolIE-ID ::= 624

id-SIB17-message ProtocolIE-ID ::= 625

id-GNBDUUESliceMaximumBitRateList ProtocolIE-ID ::= 626

id-TAINSAGSupportList ProtocolIE-ID ::= aaa

**<Unchanged Text Omitted>**

|  |
| --- |
| **Change Ends** |