3GPP TSG-RAN WG3 #117-e R3-225117

15th – 24th Aug 2022

Online

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| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **38.473** | **CR** | **0974** | **rev** | **1** | **Current version:** | **16.10.0** |  |
|  | | | | | | | | |
| *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:*** | Completion of DAPS in case of split gNB deployment to 38.473 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | ZTE | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_enh-Core | | | | |  | ***Date:*** | | | 2022-07-25 |
|  |  | | | |  | |  | | |  |
| ***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 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | In R16, a Dual Active Protocol Stack (DAPS) handover is introduced to reduce mobility interruption. In case that the power/resource coordination between the source cell and the target cell is required in DAPS HO, the source node can generate the power/resource coordination parameters/configurations and transmits them to the target node during HO preparation.  ***HandoverPreparationInformation* message**  ConfigRestrictInfoDAPS-r16 ::= SEQUENCE {  powerCoordination-r16 SEQUENCE {  p-DAPS-Source-r16 P-Max,  p-DAPS-Target-r16 P-Max,  uplinkPowerSharingDAPS-Mode-r16 ENUMERATED {semi-static-mode1, semi-static-mode2, dynamic }  } OPTIONAL  }  According to TS331, if DAPS configured, the powerCoordination parameters is transmitted:  **Source CU –> Target CU: Xn Handover request message**  -> HandoverPreparationInformation -> ConfigRestrctInfoDAPS-> powerCoordination  **Target CU -> Target DU: F1 UE context setup request message**  -> CU to DU RRC information -> Handover Preparation Information -> ConfigRestrctInfoDAPS-> powerCoordination  **Source CU -> Source DU: F1 UE context modification request message**  -> CU to DU RRC information ->**??** ConfigRestrctInfoDAPS-> powerCoordination    **If DAPS configured, powerCoordination (within ConfigRestrictInfoDAPS) is transmitted from target CU to target DU, but it is missing from source CU to source DU.**  **If DAPS configured, powerCoordination (within ConfigRestrictInfoDAPS) shall be sent from source CU to source DU by UE context modification request message.**  Impact assessment towards the previous version of the specification (same release):  This CR has isolated impact with the previous version of the specification (same release) because it only adds an optional IE in CU to DU RRC Information IE.  The impact can be considered isolated because the change only influences CU to DU RRC Information IE in UE context modification message. | | | | | | | | |
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| ***Summary of change:*** | | The powerCoordination is transmitted from source CU to source DU. | | | | | | | | |
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| ***Consequences if not approved:*** | | DAPS cannot be spported for split gNB. | | | | | | | | |
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| ***Clauses affected:*** | | 9.3.1.25, ASN.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Rev1: Revert the second change (i.e., DAPS HO Status) | | | | | | | | |

#### 9.3.1.25 CU to DU RRC Information

This IE contains the RRC Information that are sent from gNB-CU to gNB-DU.

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| IE/Group Name | Presence | Range | IE type and reference | Semantics description | Criticality | Assigned Criticality |
| CG-ConfigInfo | O |  | OCTET STRING | CG-ConfigInfo, as defined in TS 38.331 [8]. | - |  |
| UE-CapabilityRAT-ContainerList | O |  | OCTET STRING | This IE is used in the NG-RAN and it consists of the UE-CapabilityRAT-ContainerList, as defined in TS 38.331 [8]. | - |  |
| MeasConfig | O |  | OCTET STRING | MeasConfig, as defined in TS 38.331 [8] (without MeasGapConfig).  For EN-DC/NGEN-DC operation, includes the list of FR2 frequencies for which the gNB-CU requests the gNB-DU to generate gaps.  For NG-RAN,NE-DC and MN for NR-NR DC, includes the list of FR1 and/or FR2 frequencies for which the gNB-CU requests the gNB-DU to generate gaps and the gap type (per-UE or per-FR). | - |  |
| Handover Preparation Information | O |  | OCTET STRING | HandoverPreparationInformation, as defined in TS 38.331 [8]. | YES | ignore |
| CellGroupConfig | O |  | OCTET STRING | CellGroupConfig, as defined in TS 38.331 [8]. | YES | ignore |
| Measurement Timing Configuration | O |  | OCTET STRING | Contains the *MeasurementTimingConfiguration* inter-node message defined in TS 38.331 [8].  In EN-DC/NGEN-DC, it is included when the gaps for FR2 are requested to be configured by the MeNB. For MN in NR-NR DC,it is included when the gaps for FR2 and/or FR1 are requested by the SgNB | YES | ignore |
| UEAssistanceInformation | O |  | OCTET STRING | UEAssistanceInformation, as defined in TS 38.331 [8]. | YES | ignore |
| CG-Config | O |  | OCTET STRING | CG-Config, as defined in TS 38.331 [8]. | YES | ignore |
| UEAssistanceInformationEUTRA | O |  | OCTET STRING | UEAssistanceInformation, as defined in TS 36.331 [41]. | YES | ignore |
| Location Measurement Information | O |  | OCTET STRING | LocationMeasurementInfo, as defined in TS 38.331[8] | YES | ignore |
| MUSIM-GapConfig | O |  | OCTET STRING | MUSIM-GapConfig as defined in TS 38.331 [8]. | YES | ignore |
| ConfigRestrictInfoDAPS | O |  | OCTET STRING | ConfigRestrictInfoDAPS as defined in TS 38.331 [8]. This IE is used at source node if DAPS HO configured. | YES | ignore |

### 9.4.5 Information Element Definitions

Skip unchanged part

id-ENBDLTNLAddress,

id-PRS-Resource-ID,

id-LocationMeasurementInformation,

id-ConfigRestrictInfoDAPS,

maxNRARFCN,

maxnoofErrors,

Skip unchanged part

CUtoDURRCInformation ::= SEQUENCE {

cG-ConfigInfo CG-ConfigInfo OPTIONAL,

uE-CapabilityRAT-ContainerList UE-CapabilityRAT-ContainerList OPTIONAL,

measConfig MeasConfig OPTIONAL,

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

...

}

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

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

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

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

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

{ ID id-CG-Config CRITICALITY ignore EXTENSION CG-Config PRESENCE optional }|

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

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

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

...

}

ConfigRestrictInfoDAPS ::= OCTET STRING

Skip unchanged part

### 9.4.7 Constant Definitions

-- ASN1START

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-- Constant definitions

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Skip unchanged part

id-PosMeasurementPeriodicityExtended ProtocolIE-ID ::= 438

id-PRS-Resource-ID ProtocolIE-ID ::= 439

id-LocationMeasurementInformation ProtocolIE-ID ::= 440

id-ConfigRestrictInfoDAPS ProtocolIE-ID ::= xxx

END

-- ASN1STOP