**3GPP TSG-RAN WG2 meeting #131 *R2-25xxxxx***

**Bengaluru, India, 25 - 29 Aug, 2025**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **36.331** | **CR** | **Draft** | **rev** | **-** | **Current version:** | **18.5.0** |  |
|  | | | | | | | | |
| *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 | **X** | Radio Access Network | **X** | Core Network |  |

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|  | | | | | | | | | | |
| ***Title:*** | Running 36.331 CR for R19 SONMDT | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_ENDC\_SON\_MDT\_Ph4-Core | | | | |  | ***Date:*** | | | 2025-05-29 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***Release:*** | | | Rel-19 |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Introduction of R19 SON/MDT features in TS 36.331. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Introduction of R19 SON/MDT features in TS 36.331. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | R19 SON/MDT features are not suported in TS 36.331. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.3.4, 5.6.13a.3, 6.2.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | | **X** |  | Other core specifications | | | | TS 36.306 CRxxxx | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

#### 5.3.3.4 Reception of the *RRCConnectionSetup* by the UE

NOTE 1: Prior to this, lower layer signalling is used to allocate a C-RNTI. For further details see TS 36.321 [6];

The UE shall:

1> except when the UE connected to 5GC is a BL UE or UE in CE, if the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest* from a suspended RRC connection:

2> if the UE is resuming an RRC connection after early security reactivation in accordance with conditions in 5.3.3.18:

3> discard any current AS security context including the KRRCenc key, the KRRCint key, the KUPint key and the KUPenc key;

2> release all radio resources, including release of the RLC entity, the MAC configuration and the associated PDCP entity for all established or suspended RBs, except for SRB0;

2> discard the stored UE AS context and *resumeIdentity*;

2> if stored, discard the stored *nextHopChainingCount*;

2> if stored, discard the stored *drb-ContinueROHC*;

2> indicate to upper layers fallback of the RRC connection;

1> if the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest* from RRC\_INACTIVE:

2> stop T380 if running;

2> discard the stored UE Inactive AS context;

2> release *rrc-InactiveConfig*, if configured;

1> if the UE connected to 5GC is a BL UE or UE in CE, and the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest* from a suspended RRC connection:

2> discard the stored UE AS context and *resumeIdentity*;

2> if stored, discard the stored *nextHopChainingCount*;

2> if stored, discard the stored *drb-ContinueROHC*;

1> if the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest* from RRC\_INACTIVE; or

1> if the UE connected to 5GC is a BL UE or UE in CE, and the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest* from a suspended RRC connection:

2> discard any current AS security context including the KRRCenc key, the KRRCint key, the KUPint key and the KUPenc key;

2> release radio resources for all established RBs except SRB0, including release of the RLC entities, of the associated PDCP entities and of SDAP entities;

2> release the RRC configuration except for the default L1 parameter values, default MAC main configuration and CCCH;

2> apply the default NR PDCP configuration as specified in TS 38.331 [82], clause 9.2.1.1 for SRB1;

2> use NR PDCP for all subsequent messages received and sent by the UE via SRB1;

2> indicate to upper layers fallback of the RRC connection;

1> if the *RRCConnectionSetup* is received in response to an *RRCEarlyDataRequest* or *RRCConnectionResumeRequest* for transmission using PUR:

2> instruct the associated MAC entity to start *timeAlignmentTimer*;

1> perform the radio resource configuration procedure in accordance with the received *radioResourceConfigDedicated* and as specified in 5.3.10.0;

1> if stored, discard the cell reselection priority information provided by the *idleModeMobilityControlInfo* or inherited from another RAT;

1> if stored, discard the *altFreqPriorities* provided by the *RRCConnectionRelease*;

1> if stored, discard the dedicated offset provided by the *redirectedCarrierOffsetDedicated*;

1> stop timer T300;

1> if T302 is running:

2> stop timer T302;

2> if the UE is connected to 5GC:

3> perform the actions as specified in 5.3.16.4;

1> stop timer T303, if running;

1> stop timer T305, if running;

1> stop timer T306, if running;

1> stop timer T308, if running;

1> perform the actions as specified in 5.3.3.7;

1> stop timer T320, if running;

1> stop timer T350, if running;

1> perform the actions as specified in 5.6.12.4;

1> release *rclwi-Configuration*, if configured, as specified in 5.6.16.2;

1> stop timer T360, if running;

1> stop timer T322, if running;

1> if timer T331 is running:

2> stop timer T331;

2> perform the actions as specified in 5.6.20.3;

1> stop timer T323, if running;

1> forward the *dedicatedInfoNAS,* if received, to the upper layers;

1> if T309 is running:

2> stop timer T309 for all access categories;

2> perform the actions as specified in 5.3.16.4.

1> enter RRC\_CONNECTED;

1> stop the cell re-selection procedure;

1> consider the current cell to be the PCell;

1> except for NB-IoT:

2> if the UE supports RLF report for inter-RAT MRO EUTRA as defined in TS 38.306 [87], and if the UE has radio link failure or handover failure information available in *VarRLF-Report* of TS 38.331 [82] and if the RPLMN is included in *plmn-IdentityList* stored in *VarRLF-Report* of TS 38.331 [82]:

3> if *reconnectCellId* in *VarRLF-Report* of TS 38.331 [82] is not set, and if the UE failed to perform reestablishment; or

3> if *reconnectCellId* in *VarRLF-Report* of TS 38.331 [82] is not set, and if the UE selected the current PCell immediately after failure in performing *MobilityFromNRCommand*:

4> if the selected PCell is an acceptable cell as defined in TS 36.304 [4]:

5> set *timeUntilReconnection* in *VarRLF-Report* of TS 38.331 [82] to the time that elapsed since the *MobilityFromNRCommand* failure;

4> if the selected PCell is a suitable cell as defined in TS 36.304 [4]:

5> [if the UE supports RLF-Report for LTM] and if *ltmCellId* in *VarRLF-Report* of TS 38.331 [82] is set:

6> set *timeUntilReconnection* in *VarRLF-Report* of TS 38.331 [82] to the time that elapsed since the radio link failure or reconfiguration with sync failure experienced in the *failedPCellID* stored in *VarRLF-Report* of TS 38.331 [82];

5> else:

6> set *timeUntilReconnection* in *VarRLF-Report* of TS 38.331 [82] to the time that elapsed since the last radio link failure or handover failure;

5> set *eutraReconnectCellId* in *reconnectCellId* in *VarRLF-Report* of TS 38.331 [82] to the global cell identity and the tracking area code of the PCell;

2> if the UE radio link failure or handover failure information available in *VarRLF-Report* and if the RPLMN is included in *plmn-IdentityList* stored in *VarRLF-Report*:

3> if *reconnectCellId* in *VarRLF-Report* is not set, and if the UE failed to perform reestablishment:

4> set *timeUntilReconnection* in *VarRLF-Report* to the time that elapsed since the last radio link failure or handover failure;

4> set *eutraReconnectCellId* in *reconnectCellId* in *VarRLF-Report* to the global cell identity and the tracking area code of the PCell;

1> set the content of *RRCConnectionSetup**Complete* message as follows:

2> if the *RRCConnectionSetup* is received in response to an *RRCConnectionResumeRequest*:

3> if upper layers provide an S-TMSI:

4> set the *s-TMSI* to the value received from upper layers;

3> else if upper layers provide a 5G-S-TMSI:

4> if the UE is a NB-IoT UE:

5> set the *ng-5G-S-TMSI* to the value received from upper layers;

4> else:

5> set the *ng-5G-S-TMSI-Bits* to *ng-5G-S-TMSI* with the value received from upper layers;

2> else if upper layers provide a 5G-S-TMSI:

3> except for NB-IoT, set the *ng-5G-S-TMSI-Bits* to *ng-5G-S-TMSI-Part2* to the leftmost 8 bits of 5G-S-TMSI received from upper layers;

2> set the *selectedPLMN-Identity* to the PLMN selected by upper layers (see TS 23.122 [11], TS 24.301 [35] for E-UTRA/EPC and TS 24.501 [95] for E-UTRA/5GC) from the PLMN(s) included in the *plmn-IdentityList* in *SystemInformationBlockType1* (or *SystemInformationBlockType1-NB* in NB-IoT);

2> if upper layers provide the 'Registered MME', include and set the *registeredMME* as follows:

3> if the PLMN identity of the 'Registered MME' is different from the PLMN selected by the upper layers:

4> include the *plmnIdentity* in the *registeredMME* and set it to the value of the PLMN identity in the 'Registered MME' received from upper layers;

3> set the *mmegi* andthe *mmec* to the value received from upper layers;

2> if upper layers provided the 'Registered MME':

3> include and set the *gummei-Type* to the value provided by the upper layers;

2> if upper layers provide the 'Registered AMF', include and set the *registeredAMF* as follows:

3> if the PLMN identity of the 'Registered AMF' is different from the PLMN selected by the upper layers:

4> include the *plmnIdentity* in the *registeredAMF* and set it to the value of the PLMN identity in the 'Registered AMF' received from upper layers;

3> set the *amf-Identifier* to AMF Identifier of the 'Registered AMF' received from upper layers;

2> if upper layers provided the 'Registered AMF':

3> include and set the *guami-Type* to the value provided by the upper layers;

2> if upper layers provide one or more S-NSSAI (see TS 23.003 [27]):

3> include the *s-NSSAI-list* and set the content to the values provided by the upper layers;

2> if the UE supports CIoT EPS optimisation(s):

3> include a*ttachWithoutPDN-Connectivity* if received from upper layers;

3> include *up-CIoT-EPS-Optimisation* if received from upper layers;

3> except for NB-IoT, include *cp-CIoT-EPS-Optimisation* if received from upper layers;

2> if the UE supports CIoT 5GS optimisation(s):

3> for NB-IoT, include *ng-U-DataTransfer* if received from upper layers;

3> except for NB-IoT, include *cp-CIoT-5GS-Optimisatoin* if received from upper layers;

2> if connecting as an RN:

3> include the *rn-SubframeConfigReq*;

2> if the *RRCConnectionSetup* is received in response to *RRCEarlyDataRequest*:

3> set the *dedicatedInfoNAS* to a zero-length octet string;

2> else:

3> set the *dedicatedInfoNAS* to include the information received from upper layers;

2> if the *RRCConnectionSetup* is not in response to transmission using PUR and the UE has a stored *pur-Config* including *pur-ConfigID*:

3> include the stored *pur-ConfigID*;

2> if the UE is connected to EPC:

3> except for NB-IoT:

4> include the *mobilityState* and set it to the mobility state (as specified in TS 36.304 [4]) of the UE just prior to entering RRC\_CONNECTED state;

3> for NB-IoT:

4> if the UE has radio link failure information available in *VarRLF-Report-NB* and if the RPLMN is included in *plmn-IdentityList* stored in *VarRLF-Report-NB*:

5> include *rlf-InfoAvailable*;

4> if the UE has ANR measurements information available in *VarANR-MeasReport-NB* and if the RPLMN is included in *plmn-IdentityList* stored in *VarANR-MeasReport-NB*:

5> include *anr-InfoAvailable*;

3> include *dcn-ID* if a DCN-ID value (see TS 23.401 [41]) is received from upper layers;

2> else (i.e. the UE is connected to 5GC):

3> if the UE is a BL UE:

4> include *lte-M*;

2> except for NB-IoT:

3> if the UE has radio link failure or handover failure information available in *VarRLF-Report* and if the RPLMN is included in *plmn-IdentityList* stored in *VarRLF-Report*:

4> include *rlf-InfoAvailable*;

3> if the UE has MBSFN logged measurements available for E-UTRA and if the RPLMN is included in *plmn-IdentityList* stored in *VarLogMeasReport*:

4> include *logMeasAvailableMBSFN*;

3> if the UE has logged measurements available for E-UTRA and if the RPLMN is included in *plmn-IdentityList* stored in *VarLogMeasReport*:

4> include *logMeasAvailable*;

4> if Bluetooth measurement results are included in the logged measurements the UE has available:

5> include *logMeasAvailableBT*;

4> if WLAN measurement results are included in the logged measurements the UE has available:

5> include *logMeasAvailableWLAN*;

3> if the UE has connection establishment failure information available in *VarConnEstFailReport* and if the RPLMN is equal to *plmn-Identity* stored in *VarConnEstFailReport*:

4> include *connEstFailInfoAvailable*;

3> if the UE has flight path information available:

4> include *flightPathInfoAvailable*;

3> if the UE supports storage of mobility history information and the UE has mobility history information available in *VarMobilityHistoryReport*:

4> include the *mobilityHistoryAvail*;

3> if the SIB2 contains *idleModeMeasurements* and the UE has E-UTRA idle/inactive measurement information concerning cells other than the PCell available in *VarMeasIdleReport*; or

3> if the SIB2 contains *idleModeMeasurementsNR* and the UE has NR idle/inactive measurement information available in *VarMeasIdleReport*:

4> include the *idleMeasAvailable*;

3> if upper layers indicate that access to RLOS is initiated (see TS 23.401 [41] clause 4.3.8.3):

4> set *rlos-Request* to *true*;

2> if UE needs UL gaps during continuous uplink transmission:

3> include *ue-CE-NeedULGaps*;

2> for NB-IoT:

3> if the UE supports serving cell idle mode measurements reporting and *servingCellMeasInfo* is present in *SystemInformationBlockType2-NB*:

4> set the *measResultServCell* to include the measurements of the serving cell;

NOTE 2: The UE includes the latest results of the serving cell measurements as used for cell selection/ reselection evaluation, which are performed in accordance with the performance requirements as specified in TS 36.133 [16].

2> if connecting as an IAB-node:

3> include *iab-NodeIndication;*

2> if the UE is connected to NTN:

3> include *gnss-validityDuration* in accordance with the remaining time of the GNSS validity duration;

3> if UE supports GNSS position fix in RRC\_CONNECTED and *gnss-PositionFixDurationReporting* is present in *SystemInformationBlockType2(-NB)*:

4> include *gnss-PositionFixDuration* in accordance with the time duration required for the UE to acquire a GNSS position;

2> if UE supports uplink RRC Segmentation of *UECapabilityInformation* according to the network indication *rrc-SegAllowed*:

3> except for NB-IoT, may include *ul-RRC-Segmentation* if upper layers indicate that they are performing an Attach or TA Update;

2> if the UE supports uplink RRC Segmentation of *UECapabilityInformation* according to the network indication *rrc-MaxCapaSegAllowed*:

3> except for NB-IoT, include the *ul-RRC-MaxCapaSegments* if upper layers indicate that they are performing an Attach or TA Update;

1> submit the *RRCConnectionSetupComplete* message to lower layers for transmission;

1> for NB-IoT:

2> if the UE supports connected mode measurements and *connMeasConfig* is present in *SystemInformationBlockType3-NB*:

3> perform measurements as specified in 5.5.8.

1> the procedure ends.

*<Next modification>*

### 5.6.13a NR SCG failure information

#### 5.6.13a.1 General



Figure 5.6.13a.1-1: NR SCG failure information

The purpose of this procedure is to inform E-UTRAN about an SCG failure the UE has experienced (e.g. SCG radio link failure, failure to successfully complete an SCG reconfiguration with sync), as specified in TS 38.331 [82], clause 5.7.3.2.

#### 5.6.13a.2 Initiation

A UE initiates the procedure to report NR SCG failures when neither E-UTRA MCG nor NR SCG transmission is not suspended and in accordance with TS 38.331 [82], clause 5.7.3.2. Actions the UE shall perform upon initiating the procedure, other than related to the transmission of the *SCGFailureInformationNR* message are specified in TS 38.331 [82], clause 5.7.3.2.

#### 5.6.13a.3 Actions related to transmission of *SCGFailureInformationNR* message

The UE shall set the contents of the *SCGFailureInformationNR* message as follows:

1> include *failureType* within *failureReportSCG-NR* and set it to indicate the SCG failure in accordance with TS 38.331 [82], clause 5.7.3.3;

NOTE 1: This may involve including both *failureType-r15* and *failureType-v1610*, see TS 38.331 [82], clause 5.7.3.3.

1> include and set *measResultSCG* in accordance with TS 38.331 [82], clause 5.7.3.4:

1> for each NR frequency the UE is configured to measure by *measConfig* for which measurement results are available:

2> set the *measResultFreqListNR* to include the best measured cells, ordered such that the best cell is listed first using RSRP to order if RSRP measurement results are available for cells on this frequency, otherwise using RSRQ to order if RSRQ measurement results are available for cells on this frequency, otherwise using SINR to order, and based on measurements collected up to the moment the UE detected the failure, and for each cell that is included, include the optional fields that are available;

NOTE 2: Field *measResultSCG* is used to report available results for NR frequencies the UE is configured to measure by NR RRC signalling.

1> if detailed location information is available, set the content of the *locationInfo* as follows:

2> include the *locationCoordinates*;

2> include the *horizontalVelocity*, if available;

1> if available, set the *logMeasResultListWLAN* to include the WLAN measurement results, in order of decreasing RSSI for WLAN APs;

1> if available, set the *logMeasResultListBT* to include the Bluetooth measurement results, in order of decreasing RSSI for Bluetooth beacons;

1> [if the UE supports SCG failure for mobility robustness optimization]:

2> if the *failureType* is set to *synchReconfigFailureSCG*; or

2> if the *failureType* is set to *randomAccessProblem* and the SCG failure was declared while T304 was running:

~~3> if the UE has NR RACH report information available in~~ *~~VarRA-Report~~* ~~of TS 38.331 [82] that is stored and the RPLMN is included in~~ *~~plmn-IdentityList~~* ~~stored in~~ *~~VarRA-Report~~* ~~of TS 38.331 [82], set the content of~~ *~~rach-ReportNR~~* ~~in the~~ *~~UEInformationResponse message~~* ~~as below:~~

3> set *perRA-InfoListNR* to indicate the performed random access procedure related information as specified in 5.7.10.5 of TS 38.331.

3> set the *failedPSCellId* to the physical cell identity and carrier frequency of the target PSCell of the failed PSCell change or failed PSCell addition;

~~3> set the~~ *~~previousPSCellId~~* ~~to the physical cell identity and carrier frequency of the source PSCell associated to the last received~~ *~~RRCReconfiguration~~* ~~message including~~ *~~reconfigurationWithSync~~* ~~for the SCG, if available;~~

~~3> set the~~ *~~timeSCGFailure~~* ~~to the elapsed time since the last execution of~~ *~~RRCReconfiguration~~* ~~message including the~~ *~~reconfigurationWithSync~~* ~~for the SCG until declaring the SCG failure;~~

2> else:

3> set the *failedPSCellId* to the physical cell identity and carrier frequency of the PSCell in which the SCG failure was declared;

~~3> if the last~~ *~~RRCReconfiguration~~* ~~message including the~~ *~~reconfigurationWithSync~~* ~~for the SCG was received to enter the PSCell in which the SCG failure was declared:~~

~~3> set the~~ *~~timeSCGFailure~~* ~~to the elapsed time since the last execution of~~ *~~RRCReconfiguration~~* ~~message including the~~ *~~reconfigurationWithSync~~* ~~for the SCG until declaring the SCG failure;~~

~~3> set the~~ *~~previousPSCellId~~* ~~to the physical cell identity and carrier frequency of the source PSCell associated to the last received~~ *~~RRCReconfiguration~~* ~~message including~~ *~~reconfigurationWithSync~~* ~~for the SCG;~~

2> set the *previousPSCellId* to the physical cell identity and carrier frequency of the source PSCell associated to the last received *RRCReconfiguration* message including *reconfigurationWithSync* for the SCG, if available;

2> set the *timeSCG-Failure* to the elapsed time since the last execution of *RRCReconfiguration* message including the *reconfigurationWithSync* for the SCG until declaring the SCG failure.

The UE shall submit the *SCGFailureInformationNR* message to lower layers for transmission.

*<Next modification>*

### 6.2.2 Message definitions

*<Partially omitted >*

#### – *SCGFailureInformationNR*

The *SCGFailureInformationNR* message is used to provide information regarding NR SCG failures detected by the UE.

Signalling radio bearer: SRB1

RLC-SAP: AM

Logical channel: DCCH

Direction: UE to E‑UTRAN

*SCGFailureInformationNR message*

-- ASN1START

SCGFailureInformationNR-r15 ::= SEQUENCE {

criticalExtensions CHOICE {

c1 CHOICE {

scgFailureInformationNR-r15 SCGFailureInformationNR-r15-IEs,

spare3 NULL, spare2 NULL, spare1 NULL

},

criticalExtensionsFuture SEQUENCE {}

}

}

SCGFailureInformationNR-r15-IEs ::= SEQUENCE {

failureReportSCG-NR-r15 FailureReportSCG-NR-r15 OPTIONAL,

nonCriticalExtension SCGFailureInformationNR-v1590-IEs OPTIONAL

}

SCGFailureInformationNR-v1590-IEs ::= SEQUENCE {

lateNonCriticalExtension OCTET STRING OPTIONAL,

nonCriticalExtension SEQUENCE {} OPTIONAL

}

FailureReportSCG-NR-r15 ::= SEQUENCE {

failureType-r15 ENUMERATED {

t310-Expiry, randomAccessProblem,

rlc-MaxNumRetx,

synchReconfigFailureSCG, scg-reconfigFailure,

srb3-IntegrityFailure, dummy},

measResultFreqListNR-r15 MeasResultFreqListFailNR-r15 OPTIONAL,

measResultSCG-r15 OCTET STRING OPTIONAL,

...,

[[ locationInfo-r16 LocationInfo-r10 OPTIONAL,

logMeasResultListBT-r16 LogMeasResultListBT-r15 OPTIONAL,

logMeasResultListWLAN-r16 LogMeasResultListWLAN-r15 OPTIONAL,

failureType-v1610 ENUMERATED {t312-Expiry, scg-lbtFailure,

beamFailureRecoveryFailure, bh-RLF-r16,

beamFailure-r17,

spare3, spare2, spare1} OPTIONAL

]],

[[

previousPSCellId-r19 SEQUENCE {

physCellId-r19 PhysCellIdNR-r15,

carrierFreq-r19 ARFCN-ValueNR-r15

} OPTIONAL,

failedPSCellId-r19 SEQUENCE {

physCellId-r19 PhysCellIdNR-r15,

carrierFreq-r19 ARFCN-ValueNR-r15

} OPTIONAL,

timeSCG-Failure-r19 INTEGER (0..1023) OPTIONAL,

perRA-InfoListNR-r19 SEQUENCE {

perRA-InfoList-r16~~-NR~~ OCTET STRING OPTIONAL,

perRA-InfoList-v1660~~-NR~~ OCTET STRING OPTIONAL,

perRA-InfoList-v1800~~-NR~~ OCTET STRING OPTIONAL

}

]]

}

MeasResultFreqListFailNR-r15 ::= SEQUENCE (SIZE (1..maxFreqNR-r15)) OF MeasResultFreqFailNR-r15

MeasResultFreqFailNR-r15 ::= SEQUENCE {

carrierFreq-r15 ARFCN-ValueNR-r15,

measResultCellList-r15 MeasResultCellListNR-r15 OPTIONAL,

...

}

-- ASN1STOP

| *SCGFailureInformationNR* field descriptions |
| --- |
| ***failedPSCellId***  This field indicates the physical cell id and carrier frequency of the cell in which SCG failure is detected or the target PSCell of the failed PSCell change or failed PSCell addition. |
| ***failureType***  Indicates the cause of the SCG failure. When the field *failureType-v1610* is included, the network ignores the field *failureType-r15*. |
| ***measResultFreqListNR***  The field contains available results of measurements on NR frequencies the UE is configured to measure by *measConfig*. |
| ***measResultSCG***  Includes the NR *MeasResultSCG-Failure* IE as specified in TS 38.331 [82]. The field contains available results of measurements on NR frequencies the UE is configured to measure by the NR RRCConfiguration message. |
| ***previousPSCellId***  This field indicates the physical cell id and carrier frequency of the cell that is the source PSCell of the last PSCell change. In case of PSCell addition failure, this field is absent. |
| ***perRA-InfoListNR***  This field is used to indicate per RA information for NR RACH. The *perRA-InfoList-r16~~-NR~~* IE includes *PerRAInfoList-r16*, and the *perRA-InfoList-v1660~~-NR~~* IE includes *PerRAInfoList-v1660*, and the *perRA-InfoList-v1800~~-NR~~* includes *PerRAInfoList-v1800*, which are specified in TS 38.331 [82]. |
| ***timeSCG-Failure***  This field is used to indicate the time elapsed since the last execution of *RRCReconfiguration* with *reconfigurationWithSync* for the SCG until the SCG failure. Actual value = field value \* 100ms. The maximum value 1023 means 102.3s or longer. |

## MRO for MR-DC SCG failure

### RAN2#130

For open issues for running 36.331 CR, RAN2 made the following agreements:

|  |
| --- |
| Agreements   1. Remove the condition:3> if the last RRCReconfiguration message including the reconfigurationWithSync for the SCG was received to enter the PSCell in which the SCG failure was declared. 2. When the LTM based recovery fails and the UE selects E-UTRA cell and receives RRCConnectionSetup, timeUntilReconnection need to refer to the first failure. 3. Specify separate containers for all the fields i.e. PerRAInfoList-r16, PerRAInfoList-v1660 and PerRAInfoList-v1800. |

### RAN2#129bis

For open issue list, the discussion and agreements are listed as below:

R2-2502788 Open issue list for running 36.331 CR for R19 SONMDT Huawei, HiSilicon discussion Rel-19 NR\_ENDC\_SON\_MDT\_Ph4-Core

* Noted

Proposal 1: For ASN.1 definitions in TS 36.331, it is proposed to introduce the perRAInfoListNR IE, and it includes PerRAInfoList-r16, PerRAInfoList-v1660 and PerRAInfoList-v1800 (which are specified in TS 38.331).

Proposal 2: It is proposed to keep the condition for UE setting timeSCGFailure and previousPSCellId, i.e. 3> if the last RRCReconfiguration message including the reconfigurationWithSync for the SCG was received to enter the PSCell in which the SCG failure was declared.

On P2:

- Samsung wonders if it covers PSCell change and or PSCell addition? Huawei is OK to leave this as FFS.

- Nokia wonders if we can instead have a container which carries all the fields (PerRAInfoList-r16, PerRAInfoList-v1660 and PerRAInfoList-v1800)? Samsung think we can use a container (OCTET STRING) and then in the field description we clarify the content.

|  |
| --- |
| **Agreements**  **For ASN.1 definitions in TS 36.331, it is proposed to introduce the perRAInfoListNR IE, and it includes PerRAInfoList-r16, PerRAInfoList-v1660 and PerRAInfoList-v1800 (which are specified in TS 38.331).** |

### RAN2#129

No agreements.

### RAN2#128

No agreements.

### RAN2#127-bis

4: Close the stage-2 work on MRO for MR-DC SCG failure.

1. Add reporting of the following parameters for SCG failure report in EN-DC scenario:

⁻ For failedPSCellId and previousPSCellId: frequency and the PCI of the PSCell;

⁻ For timeSCGFailure: value range 0-1023;

⁻ For failureType: Reuse the legacy field.

⁻ perRA-InfoList

### RAN2#127

* To support MRO for SCG failure in EN-DC, enhance SCGFailureInformationNR message to include previousPSCellId, failedPSCellId, timeSCGFailure.

### RAN2#126

* Reply to RAN3 that we will only do EN-DC. RAN2 understands that whether also supporting (NG)EN-DC has no additional RAN2 impact hence RAN3 can decide. If later we get time we can consider other options.

[R2-2405846](https://www.3gpp.org/ftp//tsg_ran/WG2_RL2/TSGR2_126/Docs//R2-2405846.zip) Reply LS on support of MRO for MR-DC SCG failure RAN2

* Approved

### RAN2#125-bis

No agreements.