**3GPP TSG-RAN WG3 Meeting #123bis  *R3-242182***

**Changsha, CN, 15th – 19th April 2024**

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.340** | **CR** |  | **rev** | **1** | **Current version:** | **18.1.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

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| ***Title:*** | Stage2 correction on direct data forwarding | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung, CATT, Huawei, Cybercore, ZTE, | | | | | | | | | |
| ***Source to TSG:*** | R3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | NR\_Mob\_enh2-Core | | | | |  | ***Date:*** | | | 2024-04-08 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *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:*** | | In current TS 37.340, there are some procedure texts on direct data forwarding between source SN and target SN in the scenario of MN/SN initaited SN change, CPAC or S-CPAC.  However, some description of procedure text is not comprehensive and rigorous. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Corrections in below procedure text.   * In 10.5.1, the procedure text related with Figure 10.5.1-4: Conditional SN Change – SN initiated * In 10.5.2, the procedure text related with Figure 10.5.2-4: Conditional SN change procedure - SN initiated * In 10.20, the procedure text related with Figure 10.20-2: Inter-SN subsequent CPAC - SN initiated   Impact assessment towards the previous version of the specification (same release):  The impact can be considered isolated because the change only clarifies the data forwarding. | | | | | | | | |
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| ***Consequences if not approved:*** | | Early data forwarding to a unreachable path due to MN incorrect behaviour. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.5.1, 10.5.2, 10.20 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | | Rev.1: Revision of R3-241971 | | | | | | | | |

10.5 Secondary Node Change (MN/SN initiated)

10.5.1 EN-DC

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**SN initiated conditional SN Change**

The SN initiated conditional SN change procedure is used for inter-SN CPC configuration and inter-SN CPC execution.

The SN initiated conditional SN change procedure may also be initiated by the source SN, to modify the existing SN initiated inter-SN CPC configuration, or to trigger the release of the candidate SN by cancellation of all the prepared PSCells at the candidate SN and releasing the CPC related UE context at the candidate SN.

NOTE 6a0: To modify or release an existing intra-SN CPC configuration, the source SN triggers an SN initiated Conditional SN Modification (with or without SRB3) without MN involvement, as specified in 10.3.

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**Figure 10.5.1-4: Conditional SN Change – SN initiated**

Figure 10.5.1-4 shows an example signalling flow for the Conditional Secondary Node Change initiated by the SN:

1. The source SN initiates the conditional SN change procedure by sending *SgNB Change Required* message which contains a CPC initiation indication. The message also contains candidate SN ID(s) information and may include the SCG configuration (to support delta configuration), and contains the measurement results related to the candidate SN(s). The message also includes a list of proposed PSCell candidates recommended by the source SN, including execution conditions, the upper limit for the number of PSCells that can be prepared by each candidate SN, and may also include the SCG measurement configurations for CPC (e.g. measurement ID(s) to be used for CPC).

2/3. The MN requests each candidate SN to allocate resources for the UE by means of the SgNB Addition procedure(s) , indicating the request is for CPAC, and the measurements results related to the candidate SN and indicating a list of proposed PSCell candidates received from the source SN, but not including execution conditions. Within the list of PSCells suggested by the source SN, the candidate SN decides the list of PSCell(s) to prepare (considering the maximum number indicated by the MN) and, for each prepared PSCell, the candidate SN decides SCG SCells and provides the new corresponding SCG radio resource configuration to the MN in an NR *RRCReconfiguration\*\** message contained in the *SgNB Addition Request Acknowledge* message. If data forwarding is needed, the candidate SN provides data forwarding addresses to the MN. The candidate SN includes the indication of full or delta RRC configuration, and the list of prepared PSCell IDs to the MN. The candidate SN can either accept or reject each of the candidate cells suggested by the source SN, i.e. it cannot configure any alternative candidates.

NOTE 6a: In case the candidate SN includes the indication of the full RRC configuration, the MN performs release of the SN terminated radio bearer configuration and release and add of the NR SCG configuration part towards the UE in the conditional configuration.

4/5. The MN may indicate the candidate PSCells accepted by each candidate SN to the source SN via *SgNB Modification Request* message before it configures the UE e.g., when not all candidate PSCells were accepted by the candidate SN(s). If the MN does not send such indication, step 4 and 5 are skipped. If requested,the source SN sends an *SgNB Modification Request Acknowledge* message and if needed, provides an updated measurement configurations and/or the execution conditions for CPC to the MN.

6. The MN sends to the UE an *RRCConnectionReconfiguration* messageincluding the CPC configuration, i.e. a list of *RRCConnectionReconfiguration\** messagesand associated execution conditions, in which each *RRCConnectionReconfiguration\** messagecontains the SCG configuration in the *RRCReconfiguration\*\** messagereceived from the candidate SN in step 3 and possibly an MCG configuration. Besides, the *RRCConnectionReconfiguration* message can also include an updated MCG configuration, as well as the NR *RRCReconfiguration\*\**\* message generated by the source SN, e.g., to configure the required conditional measurements.

7. The UE applies the *RRCConnectionReconfiguration* message received in step 6, stores the CPC configurationand replies to the MN with an *RRCConnectionReconfigurationComplete* message, which can include an NR *RRCReconfigurationComplete\*\**\* message. In case the UE is unable to comply with (part of) the configuration included in the *RRCConnectionReconfiguration* message, it performs the reconfiguration failure procedure.

8. If an NR RRC response message is included, the MN informs the source SN with the NR *RRCReconfigurationComplete\*\**\* message via *SgNB Change Confirm* message. If step 4 and 5 are skipped, the MN will indicate the candidate PSCells accepted by each candidate SN to the source SN in the *SgNB Change Confirm* message.

The MN sends the *SgNB Change Confirm* message towards the source SN to indicate that CPC is prepared, and in such case the source SN continues providing user data to the UE. If early data forwarding is applied, the MN informs the source SN the data forwarding address(es), the source SN, if applicable, together with the Early Status Transfer procedure, starts early data forwarding. The PDCP SDU forwarding may take place during early data forwarding. In case multiple candidate SNs are prepared, the MN includes a list of Target SgNB ID and list of data forwarding addresses to the source SN.

NOTE 6b: The Data Forwarding Address Indication procedure may further be invoked to indicate to the source SN to stop already initiated early data forwarding for some PDCP SDUs if they are no longer subject to data forwarding due to the modification or cancellation of the prepared conditional PSCell change.

NOTE 6c: For the early transmission of MN terminated split/SCG bearers, the MN forwards the PDCP PDU to the candidate SN(s).

9a-9d. The source SN may send the *SgNB Modification Required* message to trigger an update of CPC execution condition and/or corresponding SCG measurement configuration for CPC. In such case in step 9b, the MN reconfigures the UE and in step 9c the UE responds with *RRCConnectionReconfigurationComplete*, similarly as in steps 6 and 7.

10. The UE starts evaluating the execution conditions. If the execution conditionof one candidate PSCell is satisfied, the UE applies the *RRCConnectionReconfiguration\** message corresponding to the selected candidate PSCell, and sends an *RRCConnectionReconfigurationComplete\** message, including the NR *RRCReconfigurationComplete\*\** message for the selected candidate PSCell, and information enabling the MN to identify the SN of the selected candidate PSCell.

11a-11b. The MN triggers the MeNB initiated SgNB Release procedure to inform source SN to stop providing user data to the UE, and if applicable, provides the address of the SN of the selected candidate PSCell to start late data forwarding.

12a-12c. If the RRC connection reconfiguration procedure was successful, the MN informs the SN of the selected candidate PSCell via *SgNB Reconfiguration Complete* message, including the SN *RRCReconfigurationComplete\*\** message. The MN sends the *SgNB Release Request* message(s) to cancel CPC in the other candidate SN(s), if configured. The other candidate SN(s) acknowledges the release request.

13. The UE synchronizes to the PSCell indicated in the *RRCConnectionReconfiguration\** message applied in step 10.

14a-14b. For SN terminated bearers using RLC AM, the source SN sends the *SN Status Transfer* message, which the MN sends then to the SN of the selected candidate PSCell, if needed.

15. If applicable, data forwarding from the source SN takes place. It may be initiated as early as the source SN receives the early data forwarding message from the MN.

16. The source SN sends the *Secondary RAT* *Data Usage Report* message to the MN and includes the data volumes delivered to and received from the UE over the NR radio for the related E-RABs.

NOTE 7: The order the source SN sends the *Secondary RAT Data Usage Report* message and performs data forwarding with MN/target SN is not defined. The SgNB may send the report when the transmission of the related bearer is stopped.

17-21. If applicable, a path update is triggered by the MN.

22. Upon reception of the *UE Context Release* message, the source SN releases radio and C-plane related resources associated to the UE context. Any ongoing data forwarding may continue.

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10.5.2 MR-DC with 5GC

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**SN initiated conditional SN Change**

The SN initiated conditional SN change procedure is used for inter-SN CPC configuration and inter-SN CPC execution.

The SN initiated conditional SN change procedure may also be initiated by the source SN, to modify the existing SN initiated inter-SN CPC configuration, or to trigger the release of the candidate SN by cancellation of all the prepared PSCells at the candidate SN and releasing the CPC related UE context at the candidate SN.

NOTE 5a0: To modify or release an existing intra-SN CPC configuration, the source SN triggers an SN initiated Conditional SN Modification (with or without SRB3) without MN involvement, as specified in 10.3.

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**Figure 10.5.2-4: Conditional SN change procedure - SN initiated**

Figure 10.5.2-4 shows an example signalling flow for the conditional SN Change initiated by the SN:

1. The source SN initiates the conditional SN change procedure by sending the *SN Change Required* message, which contains a CPC initiation indication. The message also contains candidate node ID(s) and may include the SCG configuration (to support delta configuration), and contains the measurements results which may include cells that are not CPC candidates. The message also includes a list of proposed PSCell candidates recommended by the source SN, including execution conditions, the upper limit for the number of PSCells that can be prepared by each candidate SN, and may also include the SCG measurement configurations for CPC (e.g. measurement ID(s) to be used for CPC).

2/3. The MN requests each candidate SN(s) to allocate resources for the UE by means of the SN Addition procedure(s), indicating the request is for CPAC, and the measurements results which may include cells that are not CPC candidates received from the source SN to the candidate SN, and indicating a list of proposed PSCell candidates received from the source SN, but not including execution conditions. Within the list of PSCells suggested by the source SN, the candidate SN decides the list of PSCell(s) to prepare (considering the maximum number indicated by the MN) and, for each prepared PSCell, the candidate SN decides SCG SCells and provides the new corresponding SCG radio resource configuration to the MN in an NR *RRCReconfiguration\*\** message contained in the *SgNB Addition Request Acknowledge* message. If data forwarding is needed, the candidate SN provides data forwarding addresses to the MN. The candidate SN includes the indication of full or delta RRC configuration, and the list of prepared PSCell IDs to the MN. The candidate SN can either accept or reject each of the candidate cells suggested by the source SN, i.e., it cannot configure any alternative candidates.

3a. For SN terminated bearers using MCG resources, the MN provides Xn-U DL TNL address information in the *Xn-U Address Indication* message to the candidate SN(s).

4/5. The MN may indicate the candidate PSCells accepted by each candidate SN to the source SN via *SN Modification Request* message before it configures the UE, e.g., when not all candidate PSCells were accepted by the candidate SN(s). If the MN does not send such indication, step 4 and 5 are skipped. If requested, the source SN sends an *SN Modification Request Acknowledge* message and if needed, provides an updated measurement configurations and/or the execution conditions to the MN.

6. The MN sends to the UE an *RRCReconfiguration* message including the CPC configuration, i.e. a list of *RRCReconfiguration\** messagesand associated execution conditions, in which each *RRCReconfiguration\** messagecontains the SCG configuration in the *RRCReconfiguration\*\** message received from the candidate SN in step 3 and possibly an MCG configuration. Besides, the *RRCReconfiguration* messagecan also include an updated MCG configuration, as well as the NR *RRCReconfiguration\*\**\* message generated by the source SN, e.g., to configure the required conditional measurements.

7. The UE applies the *RRCReconfiguration* message received in step 6, stores the CPC configurationand replies to the MN with an *RRCReconfigurationComplete* message, which can include an NR *RRCReconfigurationComplete\*\*\** message. In case the UE is unable to comply with (part of) the configuration included in the *RRCReconfiguration* message, it performs the reconfiguration failure procedure.

8. If an SN RRC response message is included, the MN informs the source SN with the SN *RRCReconfigurationComplete\*\*\** message via *SN Change Confirm* message. If step 4 and 5 are skipped, the MN will indicate the candidate PSCells accepted by each candidate SN to the source SN in the *SN Change Confirm* message.

The MN sends the *SN Change Confirm* message towards the source SN to indicate that CPC is prepared, and in such case the source SN continues providing user data to the UE. If early data forwarding is applied, the MN informs the source SN the data forwarding address(es), the source SN, if applicable, together with the Early Status Transfer procedure, starts early data forwarding. The PDCP SDU forwarding may take place during early data forwarding. In case multiple candidate SNs are prepared, the MN includes a list of Target SN ID and list of data forwarding addresses to the source SN.

NOTE 5a: The Xn-U Address Indication procedure may further be invoked to indicate to the source SN to stop already initiated early data forwarding for some PDCP SDUs if they are no longer subject to data forwarding due to the modification or cancellation of the prepared conditional PSCell change.

NOTE 5b: For the early transmission of MN terminated split/SCG bearers, the MN forwads the PDCP PDU to the candidate SN(s).

9a-9d. The source SN may send the *SN Modification Required* message to trigger an update of CPC execution condition and/or corresponding SCG measurement configuration for CPC. In such case in step 9b, the MN reconfigures the UE and in step 9c the UE responds with *RRCReconfigurationComplete*, similarly as in steps 6 and 7.

10. The UE starts evaluating the execution conditions. If the execution conditionof one candidate PSCell is satisfied, the UE applies *RRCReconfiguration\** message corresponding to the selected candidate PSCell, and sends an *RRCReconfigurationComplete\** message, including an *RRCReconfigurationComplete\*\** message for the selected candidate PSCell, and information enabling the MN to identify the SN of the selected candidate PSCell.

11a-11c. The MN triggers the MN initiated SN Release procedure to inform the source SN to stop providing user data to the UE, and if applicable, triggers the Xn-U Address Indication procedure to inform the source SN the address of the SN of the selected candidate PSCell to start late data forwarding.

12a-12c. If the RRC connection reconfiguration procedure was successful, the MN informs the SN of the selected candidate PSCell via *SN Reconfiguration Complete* message, including the SN *RRCReconfigurationComplete\*\** message. The MN sends the *SN Release Request* message(s) to cancel CPC in the other candidate SN(s), if configured. The other candidate SN(s) acknowledges the release request.

13. The UE synchronizes to the PSCell indicated in the *RRCReconfiguration\** message applied in step 10.

14. If PDCP termination point is changed for bearers using RLC AM, the source SN sends the *SN Status Transfer* message, which the MN sends then to the SN of the selected candidate PSCell, if needed.

15. If applicable, data forwarding from the source SN takes place. It may be initiated as early as the source SN receives the data forwarding address related information from the MN.

16. The source SN sends the *Secondary RAT Data Usage Report* message to the MN and includes the data volumes delivered to and received from the UE as described in clause 10.11.2.

NOTE 6: The order the SN sends the *Secondary RAT Data Usage Report* message and performs data forwarding with MN/target SN is not defined. The SN may send the report when the transmission of the related QoS flow is stopped.

17-21. If applicable, a PDU Session path update procedure is triggered by the MN.

22. Upon reception of the *UE Context Release* message, the source SN releases radio and C-plane related resources associated to the UE context. Any ongoing data forwarding may continue.

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10.20 Subsequent Conditional PSCell Addition or Change

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**SN initiated subsequent CPAC**

The subsequent CPAC procedure is initiated by the SN for inter-SN subsequent CPAC configuration and inter-SN subsequent CPAC execution.

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**Figure 10.20-2: Inter-SN subsequent CPAC - SN initiated**

Figure 10.20-2 shows an example signalling flow for the inter-SN subsequent CPAC initiated by the source SN:

1. The source SN (i.e. SN-1) initiates the inter-SN subsequent CPAC procedure by sending the *SN Change Required* message, which contains a subsequent CPAC initiation indication. The message also contains candidate node ID(s) and may include an SCG reference configuration (to support delta configuration), and contains the measurements results which may include cells that are not subsequent CPAC candidates. The message also includes a list of proposed PSCell candidates recommended by the source SN, including execution conditions for the initial evaluation, the upper limit for the number of PSCells that can be prepared by each candidate SN, and may also include the SCG measurement configurations for subsequent CPAC (e.g. measurement ID(s) to be used for subsequent CPAC). The source SN may also propose data forwarding to the MN or other candidate SN(s) for subsequent CPAC.

2/3. The MN requests each candidate SN(s) to allocate resources for the UE by means of the SN Addition procedure(s), indicating the request is for subsequent CPAC, and the measurements results which may include cells that are not subsequent CPAC candidates received from the source SN to the candidate SN, and indicating a list of proposed PSCell candidates to the candidate SN(s) received from the source SN, but not including execution conditions. The MN also includes information of other candidate SN(s), and for each candidate SN, a list of proposed PSCell candidates recommended by the source SN for the candidate SN to select the PSCell(s) for the following execution of subsequent CPAC. The MN also provides the upper limit for the number of PSCells that can be prepared by each candidate SN and provides a list of KSN and associated sk-Counter values for each candidate SN. Within the list of PSCells suggested by the source SN, the candidate SN decides the list of PSCell(s) to prepare (considering the maximum number indicated by the MN) and, for each prepared PSCell, the candidate SN decides other SCG SCells and provides the new corresponding SCG radio resource configuration to the MN in an NR *RRCReconfiguration*\*\* message contained in the *SN Addition Request Acknowledge* message with the prepared PSCell ID(s). For each prepared PSCell, the candidate SN also decides the list of PSCell(s) and associated execution conditions proposed for the following execution of subsequent CPAC. If data forwarding is needed, the candidate SN provides data forwarding addresses to the MN. The candidate SN may also propose data forwarding to the MN or other candidate SN(s) for subsequent CPAC. The candidate SN includes the indication of the complete or delta RRC configuration with respect to the SCG reference configuration. For the prepared PSCell(s) and the proposed PSCell(s) for the following execution of subsequent CPAC, the candidate SN can either accept or reject each of the candidate cells suggested by the source SN, i.e. it cannot configure any alternative candidates.

The MN may select one of the candidate SN(s) and requests providing the reference SCG configuration as part of the SN Addition procedure. Once obtained, the MN provides the reference configuration to other candidate SN(s).

NOTE 9: The MN may trigger the MN-initiated SN Modification procedure (to the source SN) to request a reference configuration for the subsequent CPAC before step 2, if not provided in Step 1.

NOTE 10: If applicable, the MN stores the data forwarding addresses and data forwarding proposals provided from all the candidate SN(s) and the source SN.

NOTE 11: The MN may decide to reconfigure the source SN as a candidate SN. In this case, the descriptions in the above steps 2-3 apply the same with the source SN, except that it is the MN that provides the list of proposed PSCell candidates for the source SN (as a candidate SN), and that the MN-initiated SN modification procedure is used with the source SN instead of the MN-initiated SN addition procedure. In the subsequent steps, the descriptions for any candidate SN also apply the same to the source SN (as one of candidate SN(s) for the subsequent CPAC) unless explicitly stated otherwise.

4. For SN terminated bearers using MCG resources, the MN provides Xn-U DL TNL address information in the *Xn-U Address Indication* message to the candidate SN(s).

5/6. If the lists of prepared PSCells received from all the candidate SN(s) in step 3 are different than the lists of proposed PSCells, e.g., when not all proposed PSCells were accepted by the candidate SN(s), the MN may initiate the SN Modification procedures towards the source SN and all the candidate SN(s) to inform them about the updated lists of prepared PSCells in other candidate SN(s). If requested, the source SN or the candidate SN(s) sends an SN Modification Request Acknowledge message and if needed, provides the updated candidate SCG configurations and/or the list of PSCell(s) and the associated execution conditions for the following execution of subsequent CPAC for the prepared PSCell to the MN.

7. The MN sends to the UE an *RRCReconfiguration* messageincluding the subsequent CPAC configuration, i.e. a list of *RRCReconfiguration\** messagesand associated execution conditions for the subsequent CPAC, in which each *RRCReconfiguration\** messagecontains the SCG configuration in the *RRCReconfiguration\*\** messagereceived from one of the candidate SN(s) in steps 3 and 5, and possibly an MCG configuration. Besides, the *RRCReconfiguration* message can also include an updated MCG configuration, as well as the NR *RRCReconfiguration\*\**\* message generated by the source SN, e.g., to configure the required conditional measurements. The *RRCReconfiguration* message also includes a security update configuration and may also include a reference configuration.

8. The UE applies the *RRCReconfiguration* message received in step 9, stores the subsequent CPAC configurationand replies to the MN with an *RRCReconfigurationComplete* message, which can include an NR *RRCReconfigurationComplete\*\*\** message. In case the UE is unable to comply with (part of) the configuration included in the *RRCReconfiguration* message, it performs the reconfiguration failure procedure.

9/10. If an SN RRC response message is included, the MN informs the source SN with the SN *RRCReconfigurationComplete\*\*\** message via *SN Change Confirm* message. If step 7 and 8 towards the source SN are skipped, the MN will indicate the candidate PSCells accepted by each candidate SN to the source SN in the *SN Change Confirm* message.

The MN sends the *SN Change Confirm* message towards the source SN to indicate that subsequent CPAC is prepared, and in such case the source SN continues providing user data to the UE. If early data forwarding is applied, the MN informs the source SN the data forwarding address(es), the source SN, if applicable, together with the Early Status Transfer procedure, starts early data forwarding. The PDCP SDU forwarding may take place during early data forwarding. In case multiple candidate SNs are prepared, the MN includes a list of Target SN ID and list of data forwarding addresses to the source SN.

NOTE 12: The Xn-U Address Indication procedure may further be invoked to indicate to the source SN to stop already initiated early data forwarding for some PDCP SDUs if they are no longer subject to data forwarding due to the modification or cancellation of the prepared subsequent CPAC

NOTE 13: For the early transmission of MN terminated split/SCG bearers, the MN forwads the PDCP PDU to the candidate SN(s).

11. The UE starts evaluating the execution conditions. If the execution conditionof one candidate PSCell is satisfied, the UE applies *RRCReconfiguration\** message corresponding to the selected candidate PSCell, and sends an MN *RRCReconfigurationComplete\** message, including an *RRCReconfigurationComplete\*\** message for the selected candidate PSCell, and information enabling the MN to identify the SN of the selected candidate PSCell. The *RRCReconfigurationComplete\** message may also include the sk-Counter value associated with the selected candidate PSCell if a new sk-Counter value is selected.

12. The MN informs the SN of the selected candidate PSCell that the UE has completed the reconfiguration procedure successfully via *SN Reconfiguration Complete* message, including the *RRCReconfigurationComplete\*\** message. If the sk-Counter value is received by the *RRCReconfigurationComplete\** message, the MN also indicates the received sk-Counter value to the SN.

13. The UE performs synchronisation towards the PSCell indicated in the *RRCReconfiguration\** message applied in step 13. The order the UE sends the MN *RRCReconfigurationComplete\** message and performs the Random Access procedure towards the SCG is not defined. The successful RA procedure towards the SCG is not required for a successful completion of the RRC Reconfiguration procedure.

NOTE 14: If the selected candidate PSCell that the UE executed in the step 13 belongs to the same last serving SN, the steps 10-11 in the Figure 10.20-3 may follow instead of the steps 14-19.

14/15/16. If the source SN is configured as a candidate SN, the MN triggers the MN initiated SN Modification procedure to inform the source SN to stop providing user data to the UE, to switch to the prepared state, and if applicable, to allow provisioning of new data forwarding addresses based on the data forwarding proposals of the MN and the selected candidate SN. If applicable, the MN triggers the Xn-U Address Indication procedure to inform the source SN the address of the SN of the selected candidate PSCell, to start late data forwarding. If the source SN is not configured as a candidate SN, the MN triggers the MN initiated SN Release procedure to inform the source SN to stop providing user data to the UE, and triggers the Xn-U Address Indication procedure to inform the source SN the address of the SN of the selected candidate PSCell and if applicable, starts late data forwarding.

17/18. If PDCP termination point is changed for bearers using RLC AM, and when RRC full configuration is not used, the SN sends the *SN Status Transfer* message to MN, which the MN sends then to the SN of the selected candidate PSCell, if needed.

19. If applicable, data forwarding from the source SN takes place. It may be initiated as early as the the source SN receives the early data forwarding address in step 12.

20: The source SN sends the *Secondary RAT Data Usage Report* message to the MN and includes the data volumes delivered to and received from the UE as described in clause 10.11.2.

NOTE 15: The order the SN sends the *Secondary RAT Data Usage Report* message and performs data forwarding with MN is not defined. The SN may send the report when the transmission of the related bearer is stopped.

21-25: If applicable, a PDU Session path update procedure is triggered by the MN.

26-27. If data forwarding is needed, the MN may send the *Xn-U Address Indication* message to the selected candidate SN. The SN may decide to perform, if applicable, early data forwarding for SN-terminated bearers, together with the sending of an *Early Status Transfer* message to the MN.

NOTE 12: Separate Xn-U Address Indication procedures may be initiated to provide different forwarding addresses of the prepared subsequent CPAC. In this case, it is up to the MN and the candidate SN implementations to make sure that the *Early Status Transfer* message(s) from the selected SN, if any, is forwarded to the right other candidate SN.

NOTE 16: In subsequent evaluation and execution phase, i.e., for the following execution of subsequent CPAC, the steps correspond to the steps 11~27.