**3GPP TSG-RAN3 Meeting #115-eR3-222272**

**E-meeting, 21th Feb – 3rd Mar 2022**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **37.340** | **CR** |  | **rev** |  | **Current version:** | **16.8.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **x** | Core Network |  |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | CR on data forwarding between EN-DC/MR-DC and SA handover | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | CMCC, CATT,Qualcomm | | | | | | | | | |
| ***Source to TSG:*** | RAN3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | Direct\_data\_fw\_NR-Core,TEI16 | | | | |  | ***Date:*** | | | 2022-02-10 |
|  |  | | | |  | |  | | |  |
| ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Currently,there is no description on the data forwarding between Source SN node and target node or between source node and target SN node. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Clarify that direct data forwarding could be supported for handover between EN-DC/MR-DC and SA.  Impact assessment towards the previous version of the specification (same release):  This CR is a clarification and has an isolated impact towards the previous version of the specification (same release).  This CR only has an impact on QoS flow handling.  This CR is backward compatible. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | It is not clear whether direct data forwarding could be supported between Source SN node and target node or between source node and target SN node | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 8.4 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR 36.423 CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR 38.423 CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

## 8.4 User data forwarding

Upon EN-DC specific activities, user data forwarding may be performed for E-RABs for which the bearer type change from/to MN terminated bearer to/from SN terminated bearer is performed. The behaviour of the node from which data is forwarded is the same as specified for the "source eNB" for handover, the behaviour of the node to which data is forwarded is the same as specified for the "target eNB" for handover.

For MR-DC with 5GC, user data forwarding may be performed between NG-RAN nodes whenever the logical node hosting the PDCP entity changes. The behaviour of the node from which data is forwarded is the same as specified for the "source NG-RAN node" for handover, the behaviour of the node to which data is forwarded is the same as specified for the "target NG-RAN node" for handover.

For SN change involving full configuration, the source SN behaviour is the same as the description as specified in intra-system data forwarding in TS 36.300 [2] for the source eNB or TS 38.300 [3] for the source NG-RAN node, respectively. In case that a DRB DL forwarding tunnel was established, the target SN may identify the PDCP SDUs for which delivery was attempted by the source SN, by the presence of the PDCP SN in the forwarded GTP-U packet and may discard them.

For mobility scenarios which involve more than two RAN nodes, either direct or indirect data forwarding may be applied. Two transport layer addresses of different versions may be provided to enable that the source RAN node can select either IPv4 or IPv6.

Direct data forwarding from source SN to target NG-RAN node and from source NG-RAN node to target SN for mobility scenario is supported.Meanwhile,direct data forwarding from source S-NG-RAN node to target S-NG-RAN node for SN change scenario is supported.

Direct data forwarding for inter-system handover is specified in TS 38.300 [3]. If a gNB and an en-gNB are involved in direct data forwarding and realised within the same network entity, inter-system handover to and from EN-DC allows direct data forwarding being performed in a node-internal way, in which case the source RAN node provides a UE context reference to the target side as described in clause 10.16. If the gNB and en-gNB are not realised within the same network entity, direct data forwarding for inter-system handover to and from en-gNB/gNB could be supported if there is direct connectivity between the two nodes. For MR-DC with 5GC, offloading of QoS flows within one PDU session may be performed between NG-RAN nodes. The handling of End Marker packets in case of NG-RAN initiated PDU session split is described in clause 10.14.3 and 10.14.4.