**3GPP TSG-RAN3 Meeting #124 *R3-24xxxx***

**Fukuoka, Japan, May 20th – 24th, 2024**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **38.401** | **CR** | **0370** | **rev** | **2** | **Current version:** | **17.8.0** |  |
|  |
| *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:***  | IAB-node authorization |
|  |  |
| ***Source to WG:*** | CATT, Ericsson, Huawei, ZTE, Nokia, Nokia Shanghai Bell |
| ***Source to TSG:*** | R3 |
|  |  |
| ***Work item code:*** | NR\_IAB\_enh-Core, NR\_IAB-Core |  | ***Date:*** | 2024-5-8 |
|  |  |  |  |  |
| ***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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
|  |  |
| ***Reason for change:*** | 1. “Path Switch procedure” used in 8.9.17.2.1 is not correct wording.
2. 8.9.17.2.1 misuses the term “mobile IAB”.
 |
|  |  |
| ***Summary of change:*** | Change “Path Switch procedure” in 8.9.17.2.1 to “Path Switch Request procedure”.In 8.9.17.2.1, the misuse of the term “mobile IAB” is corrected.***Impact analysis****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).**This CR has impact on the functional point of view, will only impact the RAN handling for the IAB-node authorization.* |
|  |  |
| ***Consequences if not approved:*** | The wording is not correct or misleading in 8.9.17.2.2 and 8.9.17.3 for IAB authorization in SA. |
|  |  |
| ***Clauses affected:*** | 8.9.17.1, 8.9.17.2.1, 8.9.17.2.2, 8.9.17.3 |
|  |  |
|  | **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:*** | * Compared with Rev#0, Rev#1 removes the changes with respect to the handling for IAB-node de-registration.
* Rev#1 use “IAB inter-CU topology adaptation” instead of “inter-CU topology adaptation” in 8.9.17.2.1.
* Rev#2 removes changes to 8.9.17.2.2 and 8.9.17.3 on referring to 8.9.17.2.1 instead of 8.9.17.1.
* Rev#2 adds “NR\_IAB-Core” to WID code.
 |

-------------------------------------------Start of changes-------------------------------------------

### 8.9.17 IAB-node authorization

#### 8.9.17.1 IAB-node in NSA

During the IAB-node integration procedure, the eNB receives the authorization status of the IAB-node from the EPC. The eNB forwards the authorization status to the IAB-donor-CU in the SGNB ADDITION REQUEST message. If the authorization status is “not authorized”, the IAB-donor-CU neither establishes the backhaul resources nor allocates any BAP address, TNL address or default BAP configuration for this IAB-node.

When the authorization status for the IAB-node changes, the EPC sends an updated authorization status to the IAB-MT’s eNB. The eNB forwards the authorization status to the IAB-donor-CU in the SGNB ADDITION REQUEST message or SGNB MODIFICATION REQUEST message.

In case the updated authorization status is “not authorized”, the IAB-donor-CU performs the following actions in this order: it attempts to hand over the UEs served by the IAB-node to other cell(s), releases the F1 interface towards the IAB-DU, and releases all backhaul resources (including the BAP address, TNL address and default BAP configuration) for this IAB-node.

In case the authorization status is changed back from “not authorized” to “authorized”, the phase 2 and phase 3 of the IAB-node integration procedure as defined in clause 8.12 are carried out.

#### 8.9.17.2 IAB-node with single IAB-donor in SA

##### 8.9.17.2.1 IAB-node is single-connected

During the IAB-node network integration or RLF recovery, the IAB-donor-CU receives the authorization status of the IAB-node from the 5GC. Also, during the IAB inter-CU topology adaptation procedure, the target IAB-donor-CU receives the authorization status of the IAB-node from the source IAB-donor-CU as well as from the 5GC when performing the Path Switch Request procedure. If the authorization status is “not authorized”, the IAB-donor-CU neither establishes the backhaul resources nor allocates any BAP address, TNL address or default BAP configuration for this IAB-node. When the authorization status for the IAB-node changes, the 5GC sends an updated authorization status to the IAB-donor-CU. When the authorization status received by the IAB-donor-CU changes, the IAB-donor-CU performs the SA equivalent of the steps described for NSA in clause 8.9.17.1.

##### 8.9.17.2.2 IAB-node is NR dual-connected

In case the IAB-node is dual-connected to the IAB-donor-CU, the IAB-donor-CU receives the authorization status of the IAB-node from the 5GC. Upon reception of the authorization status, the IAB-donor-CU performs the equivalent of the steps described for NSA in clause 8.9.17.1.

In case the IAB-node is dual-connected to a non-IAB-capable gNB and to an IAB-donor-CU, the MN receives the authorization status of the IAB-node from the 5GC. If the MN is the non-IAB-capable gNB and the SN is the IAB-donor-CU, the MN forwards the authorization status to the IAB-donor-CU in the S-NODE ADDITION REQUEST message or S-NODE MODIFICATION REQUEST message. Upon reception of the authorization status, the IAB-donor-CU performs the SA equivalent of steps described for NSA in clause 8.9.17. 1. If the MN is the IAB-donor-CU and the SN is not the non-IAB-capable gNB, the IAB-donor-CU performs the SA equivalent of the steps described for NSA in clause 8.9.17.1.

#### 8.9.17.3 IAB-node is served by two IAB-donors in SA

In case the IAB-MT only connects to the non-F1-terminating IAB-donor-CU or in case the IAB-MT is NR dual-connected with the non-F1-terminating IAB-donor-CU as the MN, the non-F1-terminating IAB-donor-CU sends the authorization status received from the 5GC to the F1-terminating IAB-donor-CU in the IAB-TRANPORT MIGRATION MODIFICATION REQUEST message. Upon reception of the authorization status, the F1-terminating IAB-donor-CU performs the equivalent of steps described for NSA in clause 8.9.17.1. If the authorization status is “not authorized”, the F1-terminating IAB-donor-CU sends to the non-F1-terminating IAB-donor-CU an IAB TRANSPORT MIGRATION MANAGEMENT REQUEST message requesting the release of all offloaded traffic, after which the non-F1-terminating IAB-donor-CU releases the offloaded traffic and all backhaul resources, BAP address, TNL address and default BAP configuration for the IAB-node.

In case the IAB-MT is NR dual-connected, where the MN is the F1-terminating IAB-donor-CU and the SN is a non-F1-terminating IAB-donor-CU, upon reception of the authorization status, the IAB-node’s authorization procedure follows the same steps as described in clause 8.9.17.2.

-------------------------------------------End of changes-------------------------------------------