**3GPP TSG-WG SA2 Meeting #164S2-240xxxx**

**Maastricht, NL, 19th Aug – 23rd Aug, 2024 (revision of S2-240xxxx)**

|  |
| --- |
| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
|  |
|  | **23.501** | **CR** | **XXXX** | **rev** | **-** | **Current version:** | **19.0.0** |  |
|  |
| *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 |  | Core Network | **X** |

|  |
| --- |
|  |
| ***Title:***  | On the control of access for MWAB |
|  |  |
| ***Source to WG:*** | Huawei, HiSilicon |
| ***Source to TSG:*** | SA2 |
|  |  |
| ***Work item code:*** | VMR\_Ph2 |  | ***Date:*** | 2024-08-09 |
|  |  |  |  |  |
| ***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 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:*** | The work item VMR\_Ph2 was approved in SP#104 meeting therefore it is the time to introduce the features to the related specifications. Regarding the topic of “controlling the access of the UE”, as per the discussions during the study phase, there were two aspects that to be addressed, namly controlling the access of UE to the PNI-NPN, and controlling the access of UE to the SNPN. Note that it is not the purpose to extend the mechanisms specific for NPN (e.g., CAG/SNPN ID) to the general case. In addition, the conclusion of the TR can be found as follows:* The existing CAG mechanism (as defined in Rel-18 for MBSR) can be used as an optional method for managing UE's access to MWAB-gNB, for PNI-NPN deployment cases.
* Existing SNPN control mechanism can be used to manage the UE's access to MWAB-gNB, in case the MWAB-gNB is serving a SNPN.
* - When there is mixed deployment of fixed gNB(s) and MWAB-gNB(s) for SNPN, existing SNPN control mechanism can be reused to differentiate the cells, and no standards impact is expected.
 |
|  |  |
| ***Summary of change:*** | Adding new clauses to support for Mobile gNB with Wireless Access Backhauling. |
|  |  |
| ***Consequences if not approved:*** | The controlling the access for the UE to MWAB is not clear.  |
|  |  |
| ***Clauses affected:*** | 5.X (new) |
|  |  |
|  | **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:*** |  |

\* \* \* \* First change (All Text New) \* \* \* \*

## 5.X Support for Mobile gNB with Wireless Access Backhauling (MWAB)

### 5.X.Y Control of UE access to MWAB

#### 5.X.Y.1 General

NG-RAN and 5GC are allowed to reuse the existing mechanisms e.g. forbidden Tracking Area, to manage its access control to MWAB-gNB.

#### 5.X.Y.2 Control of UE access to MWAB of PNI-NPN

CAG Identifier is used to control the access of UE via MWAB-gNB belongs to PNI-NPN with the following considerations:

- When the MWAB is allowed to operate as an MWAB-gNB for a PLMN, the MWAB is configured either during the communication with the OAM of MWAB-gNB or (pre-)configuration mechanism, with a one or more CAG identifiers which are unique within the scope of this PLMN. If the MWAB is (pre-)configured with the PLMN list in which the MWAB is allowed to operate as MWAB-gNB, the corresponding CAG Identifiers per PLMN is also configured in the MWAB.

NOTE 1: In the case the UE does not support CAG functionality, or PNI-NPN is not deployed by the network, the NG-RAN and 5GC are allowed to use not only CAG mechanism but also other existing mechanisms e.g. forbidden Tracking Area, to manage its access control to MWAB-gNB.

NOTE 2: The CAG for MWAB-gNB is supported as part of the PNI-NPN concept described in clause 5.30.3.

- NG-RAN and 5GC support the UE access control based on the CAG identifier associated with the MWAB-gNB cell and the allowed CAG identifiers for the UE that supports CAG functionality.

- Time duration restriction may be provided to the UE together with the CAG Identifier(s) for the MWAB-gNB(s) that the UE can access. The enhanced Allowed CAG list will be provided to UE and AMF for enforcement, to make sure that UE not accessing the MWAB-gNB cell outside of the time duration. For example, if the time when a certain CAG is allowed for a UE is up, the CAG for the UE is revoked from the network.

- The CAG values used by the MWAB-gNB are the ones of the PLMN that the MWAB-gNB broadcasts.

NOTE 3: Control of the MWAB-UE access to the serving network is based on normal mobility restriction management based on subscription data from MWAB-UE.

#### 5.X.Y.3 Control of UE access to MWAB of SNPN

A dedicated SNPN ID can be used to control the UE to access the MWAB-gNB of SNPN.

If an SNPN has both normal gNB and MWAB-gNB with specific time or location, the MWAB-gNB can be considered as part of SNPN providing access for Localized Services. To control the UE's access to MWAB-gNB for SNPN, the UE is required to support accessing an SNPN providing access for Localized Services and has been configure the following information as specified in clause 5.30.2.3:

- Credentials Holder controlled prioritized list of preferred SNPNs for accessing Localized Services, each entry of the list includes:

- an SNPN identifier;

- validity information; and

- optionally, location assistance information.

- Credentials Holder controlled prioritized list of GINs for accessing Localized Services, each entry of the list includes:

- a GIN;

- validity information; and

- optionally, location assistance information.

Validity information consists of:

- Time validity information, i.e. time periods (defined by start and end times) when access to the SNPN for accessing Localized Services is allowed; and

- optionally, location validity information containing one or more location information as defined in TS 24.501 [47].

\* \* \* \* End of changes \* \* \* \*