**3GPP TSG-CT WG4 Meeting #110-eC4-223xxx**

**E-Meeting, 12th – 20th May 2022** *Revision of C4-223104*

|  |
| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  |  | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  |
| *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 |  | Core Network | **X** |

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| --- |
|  |
| ***Title:***  | Broadcast MBS Session Release Require procedure |
|  |  |
| ***Source to WG:*** | , Ericsson, ZTE |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | MBS |  | ***Date:*** |  |
|  |  |  |  |  |
| ***Category:*** | F |  | ***Release:*** |  |
|  | *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-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | CR 23.247 #0102 specifies a new Broadcast MBS Session Release Require procedure, whereby an NG-RAN node can initiate the release of an MBS session, e.g. when the NG-RAN node is no longer able to provide the service over the radio due to lack of radio resources. The stage 2 CR specifies in particular: 1. If unicast transport applies in N3mb, the AMF receives the DL tunnel Info for the Broadcast MBS Session from the NG-RAN in step 2. The AMF notifies the MB-SMF about the DL tunnel release via Namf\_MBSBroadcast\_ContextStatusNotify.

 This requires corresponding updates in TS 29.518. |
|  |  |
| ***Summary of change:*** | The Namf\_MBSBroadcast\_ContextStatusNotify is used to notify the MB-SMF about the release of the MBS session in a NG-RAN node (to enable the MB-SMF to instruct the MB-UPF to stop MBS data delivery towards the RAN node, when unicast transport is used over N3mb). |
|  |  |
| ***Consequences if not approved:*** | Stage 2 requirements cannot be implemented |
|  |  |
| ***Clauses affected:*** | 5.6.2.5, 6.5.6.3.4, 6.5.6.4.3.2, A.6 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** | **X** |  |  Other core specifications  | TS 23.247 CR 0102TS 38.413 CR 0813 |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** | This CR introduces backward compatible corrections to the Namf\_MBSBroadcast API. |
|  |  |
| ***This CR's revision history:*** | Rev.1: Ericsson and ZTE are added as co-sources. A new NOTE is added to Table 6.5.6.4.3-1. |

\* \* \* First Change \* \* \* \*

#### 5.6.2.5 ContextStatusNotify

The ContextStatusNotify service operation shall be used by the AMF to notify status change of a broadcast MBS session context to the NF Service Consumer (e.g. MB-SMF).

It is used in the following procedures:

- MBS Session Start for Broadcast (see clause 7.3.1 of 3GPP TS 23.247 [55]);

- MBS Session Update for Broadcast (see clause 7.3.3 of 3GPP TS 23.247 [55]);

- Broadcast MBS Session Release Require (see clause 7.3.x of 3GPP TS 23.247 [55]).

The AMF shall notify status change of a broadcast MBS session context to the NF Service Consumer (e.g. MB-SMF) by using the HTTP POST method as shown in Figure 5.6.2.5-1.



Figure 5.6.2.5-1: Broadcast MBS session context status change notification

1. The AMF shall send a POST request targeting the notification URI received from the NF Service Consumer. The payload body of the POST request shall contain the following information:

- MBS Session ID (i.e. TMGI, or TMGI and NID for an MBS session in an SNPN);

- Area Session ID, if this is a Location dependent broadcast MBS service;

- one or more N2 MBS Session Management containers, if N2 MBS Session Management information (e.g. MBS Session Information Response Transfer IE, MBS Session Information Failure Transfer IE or MBS Session Release Response Transfer IE in 3GPP TS 38.413 [12]) has been received from one or more NG-RANs that needs to be transferred to the NF Service Consumer;

- the operationStatus IE indicating the completion of the Broadcast MBS session establishment or update, if the NF Service Consumer has requested to establish or update the Broadcast MBS session context and a response has been received from all NG-RANs; and

- the operationStatus IE indicating the incompletion of the Broadcast MBS session establishment or update, if the NF Service Consumer has requested to establish or update the Broadcast MBS session context including a maximum response time and the AMF has not received responses from all NG-RANs before the maximum response time elapses.

2a. On success, the NF Service Consumer shall return a "204 No Content" response.

2b. On failure or redirection, one of the HTTP status code listed in Table 6.5.5.2.3.1-3 shall be returned and appropriate additional error information should be returned.

\* \* \* Next Change \* \* \* \*

##### 6.5.6.3.4 Enumeration: NgapIeType

Table 6.5.6.3.4-1: Enumeration NgapIeType

|  |  |
| --- | --- |
| Enumeration value | Description |
| "MBS\_SES\_SETUP\_REQ" | MBS Session Information Setup Request Transfer |
| "MBS\_SES\_RSP" | MBS Session Information Response Transfer |
| "MBS\_SES\_FAIL" | MBS Session Information Failure Transfer |
| "MBS\_SES\_MOD\_REQ" | MBS Session Information Modify Request Transfer |
| "MBS\_SES\_REL\_RSP" | MBS Session Release Response Transfer |

Editor's Note: The contents of the above table will be aligned with the final contents of TS 38.413.

\* \* \* Next Change \* \* \* \*

6.5.6.4.3.2 NGAP IEs

N2 Information may encode following NGAP MB-SMF related IE specified in clause 9.3.A of 3GPP TS 38.413 [12], as summarized in Table 6.5.6.4.3-1.

Table 6.5.6.4.3-1: N2 Information content for class MBS-SM

|  |  |  |
| --- | --- | --- |
| NGAP IE | Reference(3GPP TS 38.413 [12]) | Related NGAP message |
| MBS Session Information Setup Request Transfer | 9.3.A.w | BROADCAST SESSION SETUP REQUEST |
| MBS Session Information Response Transfer | 9.3.A.x | BROADCAST SESSION SETUP RESPONSEBROADCAST SESSION MODIFICATION RESPONSE |
| MBS Session Information Failure Transfer | 9.3.A.z | BROADCAST SESSION SETUP FAILUREBROADCAST SESSION MODIFICATION FAILURE |
| MBS Session Information Modify Request Transfer | 9.3.A.y | BROADCAST SESSION MODIFICATION REQUEST |
| MBS Session Release Response Transfer | 9.3.5.z | BROADCAST SESSION RELEASE RESPONSE(NOTE) |
| NOTE: An MBS Session Release Response Transfer IE shall only be sent to the MB-SMF during a Broadcast MBS Session Release Require procedure (see clause 7.3.x of 3GPP TS 23.247 [55]), when unicast transport applies over N3mb, to transfer the DL F-TEID of the NG-RAN node in which the MBS session has been released and towards which the delivery of MBS data shall be stopped.  |

Editor's Note: The contents of the above table (IE names, message names, clause numbers) will be aligned with the final contents of TS 38.413.

\* \* \* Next Change \* \* \* \*

## A.6 Namf\_MBSBroadcast API

openapi: 3.0.0

info:

 version: 1.0.0-alpha.2

 title: Namf\_MBSBroadcast

 description: |

 AMF MBSBroadcast Service

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[…]

 NgapIeType:

 description: NGAP Information Element Type

 anyOf:

 - type: string

 enum:

 - MBS\_SES\_SETUP\_REQ

 - MBS\_SES\_RSP

 - MBS\_SES\_FAIL

 - MBS\_SES\_MOD\_REQ

 - MBS\_SES\_REL\_RSP

 - type: string

\* \* \* End of Changes \* \* \* \*