**SA WG2 Meeting #144E (e-meeting) S2-210xxxx**

**April 12 – 16, 2021, Elbonia**

**Source: CATT**

**Title: MB-SMF services**

**Document for: Approval**

**Agenda Item: 8.9**

**Work Item / Release: 5MBS / Rel-17**

*Abstract of the contribution: This contribution proposes definitions of services provided by the MB-SMF to support MBS.*

1. Introduction

The MB-SMF provides services related to multicast and broadcast session management to support MBS. This contribution proposes definitions of those services.

2. Proposal

It is proposed to include the following changes in TS 23.247.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* 1st Change (all new text)\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 9.X MB-SMF services

### 9.x.1 General

The following table shows the MB-SMF Services and MB-SMF Service Operations.

Table 9.x.1-1: NF services provided by the MB-SMF

|  |  |  |  |
| --- | --- | --- | --- |
| Service Name | Service Operations | OperationSemantics | Example Consumer(s) |
| Nmbsmf\_MBSession | Create | Request/Response | MBSF, NEF |
|  | Update | Request/Response | MBSF, NEF |
|  | Release | Request/Response | MBSF, NEF |
|  | Join | Request/Response | SMF |
|  |  |  |  |

### 9.x.2 Nmbsmf\_MBSession Service

#### 9.x.2.1 General

**Service description:** This service operates on the multicast and broadcast sessions. The following are the key functionalities of this NF service:

- (between MBSF/NEF and MB-SMF) Creation/Modification/Activation/Deactivation/Release of multicast sessions;

- (between MBSF/NEF and MB-SMF) Creation/Modification/Start/Stop of broadcast sessions;

- (between SMF and MB-SMF) UE join for an multicast session;

- (between SMF and MB-SMF) Delivery method switching between 5GC Shared MBS traffic delivery method and 5GC Individual MBS traffic delivery method, for an multicast session.

#### 9.x.2.2 Nmbsmf\_MBSession\_Create service operation

**Service operation name:** Nmbsmf\_MBSession\_Create.

**Description:** Create a new multicast session or broadcast session in the MB-SMF.

**Input, Required:** MBSF ID or NEF ID, DNN, Serving Network (PLMN ID, or PLMN ID and NID, see clause 5.18 of TS 23.501 [5]).

**Input, Optional:** S-NSSAI, MBS Session ID (source specific multicast address or TMGI), Subscription for MBS Session Status Notification, AN type, PCF ID, PCF Group ID.

**Output, Required:** Result Indication, and if successful MBS Session Context ID.

**Output, Optional:** MBS Session ID, S-NSSAI, Cause, MB-UPF tunnel info, QoS Profile(s), Session-AMBR, QoS Rule(s), QoS Flow level QoS parameters if any for the QoS Flow(s) associated with the QoS rule(s).

#### 9.x.2.3 Nmbsmf\_MBSession\_Update service operation

**Service operation name:** Nmbsmf\_MBSession\_Update.

**Description:** Update the established multicast session or broadcast session.

**Input, Required:** MBS Session ID.

**Input, Optional:** QoS Profile(s), Session-AMBR, QoS Rule(s), QoS Flow level QoS parameters if any for the QoS Flow(s) associated with the QoS rule(s).

**Output, Required:** Result Indication.

**Output, Optional:** Cause.

#### 9.x.2.4 Nmbsmf\_MBSession\_Release service operation

**Service operation name:** Nmbsmf\_MBSession\_Release.

**Description:** Release the multicast session or broadcast session.

**Input, Required:** MBS Session ID.

**Input, Optional:** None.

**Output, Required:** Result Indication.

**Output, Optional:** Cause.

#### 9.x.2.5 Nmbsmf\_MBSession\_Join service operation

**Service operation name:** Nmbsmf\_MBSession\_Join.

**Description:** Request UE join for an multicast session.

**Input, Required:** SMF ID, SUPI or PEI, MBS Session ID.

**Input, Optional:** S-NSSAI, DNN, UE location information, Subscription for MBS Session Status Notification.

**Output, Required:** Result Indication, and if successful MBS Session Context ID.

**Output, Optional:** MBS Session ID, Cause, QFI(s), QoS Profile(s), Session-AMBR, QoS Rule(s), QoS Flow level QoS parameters if any for the QoS Flow(s) associated with the QoS rule(s), S-NSSAI, DNN.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*