**3GPPSA4 #120-e S4- 220989**

**E-meeting, 17-26 Aug 2022**

|  |
| --- |
| *CR-Form-v12.0* |
| **DRAFT CHANGE REQUEST** |
|  |
|  | **26**.**501** | **CR** |  | **rev** | **-** | **Current version:** | **17.2.0** |  |
|  |
| *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 | **X** | Radio Access Network |  | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  | **[5GMSA\_PH2] Uplink high level procedure**  |
|  |  |
| ***Source to WG:*** | Tencent |
| ***Source to TSG:*** |  |
|  |  |
| ***Work item code:*** | 5GMSA\_PH2 |  | ***Date:*** | 8/09/2022 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | 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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | This document updates 6.1: Procedures for uplink streaming general subclause. This update uses the call flow of the most common collaboration scenario (uplink collaboration scenario 5 of TR 26.804) which is aligned with download streaming call flow defined in TS26.501 clause 5. For simplicity, the content preparation steps are eliminated. |
|  |  |
| ***Summary of change:*** | 6.1 general clause of uplink streaming including:* Update of the call flow and the steps
* Editorial update of the text.
 |
|  |  |
| ***Consequences if not approved:*** |  |
|  |  |
| ***Clauses affected:*** |  |
|  |  |
|  | **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:*** |  |

 CHANGE

# 6 Procedures for Uplink Media Streaming

## 6.1 General

The procedures for uplink media streaming allow a 5GMS Application Provider to create, modify, establish and delete sessions. Uplink media streaming sessions exist between a 5GMSu Client and a 5GMSu AS.

The uplink streaming procedures follow a general high-level workflow, starting from provisioningto the actual uplink streaming sessions. The **Egest Session** refers to the time period during which media content is uplink streamed into the 5GMSu AS and egested from there to the 5GMS Application Provider. The **P**rovisioning **Session** refers to the time period during which the 5GMSu Client is permitted to upload stream media content. Interactions between the 5GMSu AF and the 5GMSu Application Provider may occur at any time while the Provisioning Session is active.

The 5GMSu Provisioning API allows the selection of Media Session Handling (M5u) and Uplink Streaming (M4u) options, including whether the media content is published to trusted 5GMSu ASs. The 5GMSu AF selects the M5u interface according to the provisioning option. The Media Session Handling interface exposed by the 5GMSu AF can be used for remote control, metrics reporting, requesting different policy and charging treatments, or 5GMSu AF-based Network Assistance.

When the 5GMSu AF and AS are in the same DN, then the 5GMSu AF selects the 5GMSu AS. Interactions between a 5GMSu AF and a 5GMSu AS (M3u interactions) take place for Content Egest (M2u) and Uplink Streaming (M4u) resource reservations. The 5GMSu AS allocates M2u and M4u resources and communicates resource identifiers back to the 5GMSu AF. The 5GMSu AF provides information about the provisioned resources (in the form of resource identifiers) for Media Session Handling, Content Egest, and Uplink Streaming to the 5GMSu Application Provider. The resource identifiers for Media Session Handling and Uplink Streaming are needed by the 5GMSu Client to access the selected features.

When 5GMSu AF and 5GMSu AS are operated by different providers, then the M3u interface is not used and the 5GMSu AF does not provide Content Egest (M2u) and Uplink Streaming (M4u) resource reservations. M3u procedures are not specified.

5GMSu Client can (in principle) start the uplink streaming by activating its uplink streaming session. The uplink streaming session for a given UE (or for each UE) is active from the time at which the 5GMSu-Aware Application activates the transmission of an uplink streaming service until its termination.

The 5GMSu-Aware Application receives application metadata from the 5GMSu Application Provider before transmitting the uplink streaming media. The application metadata contains Service Access Information, which acts as an entry point for the 5GMSu Client to start the uplink streaming session. The 5GMSu Client may either receive the Service Access Information from the 5GMSu Application Provider (using a not standardized interface) or instructions for a remote control session. When remote control is activated, then the 5GMSu Client is remotely configured and controlled by a 5GMSu AF.

Figure 6.1-1 provides a basic high-level call flow for uplink streaming. The corresponding collaboration scenario is defined in clause A.10.



Figure 6.1-1: High level call flow for uplinking streaming

Steps:

1. The 5GMSu Application Provider provisions the 5GMSu AF at reference point M1u, including a Content Publishing Configuration for content egest and, optionally, Content Preparation Templates.

2. Based on the provisioned Content Publishing Configuration, the 5GMSu AF requests the 5GMSu AS to confirm the availability of resources for content preparation.

At some later point in time:

3. The 5GMSu Application Provider provides Service Access Information to the 5GMS-Aware Application at reference point M8u.

4. When the 5GMSu-Aware Application decides to activate the streaming service transmission, the Service Access Information is provided to the 5GMSu Client.

5. The 5GMSu Client request the start of media uplink streaming (M5u).

Alternatively:

6. The 5GMS-Aware Application requests the 5GMSu Client to start an uplink streaming session (M6u/M7u).

7. The 5GMSu Client requests Service Access Information from the 5GSMu AF at reference point M5u.

Then:

8. t

9. The 5GMSu Client starts the Egest Session by activating the uplink streaming session.

10. Uplink media streaming starts from the 5GMSu Client to the 5GMSu AS via reference point M4u.

11. If content preparation was provisioned in step 1, the uplinked media may be manipulated by the 5GMSu AS prior to egest.

12. Media streaming egest starts from the 5GMSu AS to the 5GMSu Application Provider at reference point M2u.

Clauses A.11 to A.15 define additional collaboration scenarios for uplink streaming. The call flow for each collaboration scenario is also included in each subclause.

END OF CHANGES