**3GPP SA4 #114-eS4-210766**

**19-28 May 2021**

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| *CR-Form-v12.0* |
| **Pseudo CHANGE REQUEST** |
|  |
|  | **26.804** | **CR** | **<CR#>** | **rev** | **-** | **Current version:** | **0.2.1** |  |
|  |
| *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 | **X** | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | [FS\_5GMS-EXT] Updated text for uplink streaming |
|  |  |
| ***Source to WG:*** | Tencent |
| ***Source to TSG:*** | SA4 |
|  |  |
| ***Work item code:*** | FS\_5GMS-EXT |  | ***Date:*** | 2021-05-10 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
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| ***Reason for change:*** | The study item description identifies the key topic “Uplink Streaming”. |
|  |  |
| ***Summary of change:*** | Adding call flows for other collaboration scenarios |
|  |  |
| ***Consequences if not approved:*** | Key topic not addressed |
|  |  |
| ***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:*** |  |
| ***56***  |  |
| ***This CR's revision history:*** |  |

**===== CHANGE 1 =====**

### 5.5.4 Mapping to 5G Media Streaming and High-Level Call Flows

#### 5.5.4.1 Collaboration scenario 1 call flow



Figure 5.5.4.1-1: Collaboration scenario 1 Call flow

NOTE: In this scenario, the UE can not reach the 5GMSu AF.

Steps:

1. The 5GMSu Application Provider creates a Provisioning Session for uplink streaming with the 5GMSu AF.

2. The 5GMSu Application Provider creates a Content Publishing Configuration as part of the Provisioning Session that defines the instructions for content egest (M1u).

3. The 5GMSu AF, based on the received Content Publishing Configuration, requests the 5GMSu AS to instantiate the content preparation process (M3u).

4. The 5GMSu AS initialises the content preparation process.

5. The 5GMSu AS acknowledges the initialisation of the required process (M3u).

NOTE: M3u procedures between the 5GMS AF and the 5GMS AS are outside the scope of TS 26.512 [16].

6. The 5GMSu AF acknowledges the successful creation of the Content Publishing Configuration to the 5GMSu Application Provider (M1u).

At some later point in time:

7. The 5GMSu Application Provider optionally provides Service Access Information to the 5GMS-Aware Application (M8, out of scope).

8. Uplink media streaming starts from the 5GMSu Client to the 5GMSu AS (M4u).

9. Media streaming egest starts from the 5GMSu AS to the 5GMSu Application Provider (M2u).

Finally:

10. The 5GMSu AS releases its resources after observing a period of inactivity.

NOTE: Step 10 is implementation-dependent.

#### 5.5.4.2 Collaboration scenario 2 call flow



Figure 5.5.4.2-1: Collaboration scenario 2 Call flow

NOTE: In this scenario, both Provisioning function and AS are in the external DN.

Steps:

1. The 5GMSu Application Provider creates a Provisioning Session for uplink streaming with the 5GMSu AF (M1u′).

2. The 5GMSu AF requests the 5GMSu AS to initialise the required content prepatation process (M3u).

3. The 5GMSu AS initialises the content preparation process.

4. The 5GMSu AS acknowledges the initialisation of the required process (M3u).

5. The 5GMSu AF acknowledges the successful creation of the Provisioning Session to the 5GMSu Application Provider (M1u′).

At some later point in time:

6. The 5GMSu Application Provider provides Service Access Information to the 5GMS-Aware Application (M8, out of scope).

7. Uplink media streaming starts from the 5GMSu Client to the 5GMSu AS (M4u).

8. Media streaming egest starts from the 5GMSu AS to the 5GMSu Application Provider (M2u).

Finally:

9. The 5GMSu AS releases its resources after observing a period of inactivity.

NOTE: Step 9 is implementation-dependent.

#### 5.5.4.3 Collaboration scenario 3 call flow



Figure 5.5.4.3-1: Collaboration scenario 3 Call flow

NOTE: In this scenario, the AF is in Trusted DN, however the Provisioning function and AS are in the external DN.

Steps:

1. The 5GMSu Application Provider creates a Provisioning Session with its internal Provisioning function (M1u′).

2. The Provisioning function requests the 5GMSu-like AS to initialise the required content preparation process instantiation (M3u).

3. The 5GMSu-like AS instantiates the content preparation process.

4. The 5GMSu-like AS acknowledges the Provisioning the instantiation of required process (M3u).

5. The Provisioning function acknowledges successful provisioning to the 5GMSu Application Provider (M1u′).

6. The 5GMSu Application Provider creates a Provisioning Session for uplink streaming with the 5GMSu AF.

X. The 5GMSu Application Provider creates a Content Publishing Configuration as part of the Provisioning Session that defines the instructions for content egest (M1u).

At some later point in time:

7. The 5GMSu Application Provider optionally provides Service Access Information to the 5GMS-Aware Application (M8, out of scope).

8. The 5GMS-Aware Application requests the 5GMSu Client to start an uplink streaming session (M6/7u).

9. The 5GMSu Client optionally (and in the case step 5 was not performed) requests Service Access Information from the 5GSMu AF (M5u).

~~10. The 5GMSu Client requests start of the uplink streaming session from the 5GSMu AF (M5u).~~

10. Uplink media streaming starts from the 5GMSu Client to the 5GMSu-like AS (M4u′).

11. Media streaming egest starts from the 5GMSu-like AS to the 5GMSu Application Provider (M2u).

Finally:

12. The 5GMSu AS releases its resources after observing a period of inactivity.

NOTE: This step is implementation dependent.

#### 5.5.4.4 Collaboration scenario 4 call flow



Figure 5.5.4.4-1: Collaboration scenario 5 Call flow

NOTE: In this scenario, both AF and AS are in the external DN.

Steps:

1. The 5GMSu Application Provider creates a Provisioning Session for uplink streaming with the 5GMSu AF (M1u′).

2. The 5GMSu Application Provider creates a Content Publishing Configuration as part of the Provisioning Session that defines the instructions for content egest (M1u′).

3. The 5GMSu AF, based on the received publishing configuration, requests the 5GMSu AS to confirm the availability of content resources for egest (M3u).

NOTE: M3u procedures between the 5GMS AF and the 5GMS AS are outside the scope of TS 26.512 [16].

4. The 5GMSu AF acknowledges the successful creation of the Content Publishing Configuration to the 5GMSu Application Provider (M1u′).

At some later point in time:

5. The 5GMSu Application Provider optionally provides Service Access Information to the 5GMS-Aware Application (M8, out of scope).

6. The 5GMS-Aware Application requests the 5GMSu Client to start an uplink streaming session (M6/7u).

7. The 5GMSu Client optionally (and in the case step 5 was not performed) requests Service Access Information from the 5GSMu AF (M5u).

8. The 5GMSd AF requests initialisation of the content preparation process (M3u).

9. The 5GMSd AS initialises the content preparation process, if is not already running (M3u).

10. The 5GMSd AF acknowledges the initialisation of the content preparation process (M3u).

 Note: If step 5 occurs, it is assumed that the Application Provider already initialized the content preparation process prior to the step 5 and steps 8-10 are not needed.

11. In the case of occurring step 7, the 5GMSMu AF provides Service Access Information (M5u).

12. Uplink media streaming starts from the 5GMSu Client to the 5GMSu AS (M4u).

13. Media streaming egest starts from the 5GMSu AS to the 5GMSu Application Provider (M2u′).

Finally:

14. The 5GMSu AS releases its resources after observing a period of inactivity.

NOTE: This step is implementation-dependent.

#### 5.5.4.5 Collaboration scenario 5 call flow



Figure 5.5.4.5-1: Collaboration scenario 5 Call flow

Steps:

1. The 5GMSu Application Provider creates a Provisioning Session with the 5GMSu AF.

2. The 5GMSu Application Provider requests the 5GMSu AF to create one Content Publishing Configuration that defines the instructions for content egest (M1u).

3. The 5GMSu AF, based on the received Content Publishing Configuration, requests the 5GMSu AS to confirm the availability of content resources for egest.

NOTE: M3u procedures between the 5GMS AF and the 5GMS AS are outside the scope of TS 26.512 [16].

4. The 5GMSu AF acknowledges to the 5GMSu Application Provider the successful creation of the Content Publishing Configuration (M1u).

At some later point in time:

5. The 5GMSu Application Provider optionally provides Service Access Information to the 5GMS-Aware Application (M8, out of scope).

6. The 5GMS-Aware Application requests the 5GMSu Client to start an uplink streaming session (M6/7u).

7. The 5GMSu client optionally (and in the case step 5 was not performed) requests service access information from the 5GSMu AF (M5u).

8. The 5GMSd AF requests instantiation of the content preparation process (M3u).

9. The 5GMSd AS instantiates the content preparation process if is not already running (M3u).

10. The 5GMSd AF acknowledges the instantiation of the content preparation process (M3u).

Note: If step 5 occurs, it is assumed that the Application Provider already initialized the content preparation process prior to the step 5 and steps 8-10 are not needed.

11. In the case of occurring step 7, the 5GMSMu AF provides Service Access Information (M5u).

12. Uplink media streaming starts from the 5GMSu Client to the 5GMSu AS (M4u).

13. Media streaming egest starts from the 5GMSu AS to the 5GMSu Application Provider (M2u).

Finally:

14. The 5GMSu AS releases its resources after observing a period of inactivity.

 NOTE: This step is implementation dependent.

As is shown, a new resource type, the Content Publishing Configuration is added. This describes the configuration of the egest (M2u) used in step 13.

#### 5.5.4.6 Collaboration scenario 6 call flow

The call flow for this collaboration scenario is described in 5.2.6.3.