**3GPP TSG-SA WG6 Meeting #38-e S6-201230**

**e-meeting, 20th – 31st July 2020 (revision of S6-201089)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **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)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | Providing stored files in MCData content server for FD over MBMS | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | S6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eMCData3 | | | | |  | ***Date:*** | | | 2020-07-15 |
|  |  | | | |  | |  | | |  |
| ***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 can be 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:*** | | As described in clause 6.6.3.1.5, the MCData content server provides a repository area where authorized MCData users temporarily store files that are intended to be shared with other MCData users. The distribution of such files targeting a group of MCData users can be performed over MBMS. This clause includes an editor’s note indicating that how a stored file is provided for distribution over MBMS is FFS. Therefore, this editor’s note needs to be resolved. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | The editor’s note in clause 6.6.3.1.5 is resolved by introducing procedures to define how a stored file in the MCData content server is provided for distribution over MBMS. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | It is unspecified how a stored file in the MCData content server is provided for distribution over MBMS. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 6.6.3.1.5, 7.3.5.1, (new) 7.3.5.3.x | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \*

##### 6.6.3.1.5 MCData content server

The MCData content server functional entity provides a repository area in the MCData trust domain allowing authorized MCData users to temporarily store files that are intended to share to other MCData users. It provides common pool of storage area (i.e. size) to all authorized MCData users to use, no personal space is allocated. An authorized MCData user can use the supported operations on the defined reference point to upload shared files and download the files that are shared to him. The MCData server will use the defined reference point to access the files stored in the MCData content server and support the necessary operational functionalities. As part of the file life cycle management the temporarily stored files will be removed periodically based on the Mission Critical service provider policy. An MCData content server may share files with another MCData content server in another MCData system to support interconnection.

If the MBMS user service architecture described in 3GPP TS 26.346 [21] is utilized for file distribution, the MCData content server provides the stored file associated to the established MBMS session.

NOTE: The security aspects of the MCData content server and its operational supports are the responsibility of SA3 and thus outside the scope of the present document.

\* \* \* Next change \* \* \*

#### 7.3.5.1 General

This subclause defines information flows and procedures for usage of MBMS user services that applies to MCData file distribution. MBMS user services can be used for any MC service group.

The MBMS user service architecture is described in 3GPP TS 26.346 [21].

Editor's note: The presence of the BM‑SC within the trust domain of the MCData system, regarding the ingestion of a file for distribution over MBMS, and the required MCData end-to-end encryption solution are FFS and need to be coordinated with SA3.

\* \* \* Next change \* \* \*

##### 7.3.5.3.x Providing stored files in the MCData content server for distribution over MBMS

###### 7.3.5.3.x.1 General

As described in clause 6.6.3.1.5, the MCData content server provides a repository area where authorized MCData users temporarily store files that are intended to be shared with other MCData users. The distribution of such files targeting a group of MCData users can be performed over MBMS.

For the case that the MBMS user service architecture is used over the xMB interface (specified in 3GPP TS 26.348 [19]), two ingest modes, push and pull, can be defined by the MCData server to ingest the file into the BM‑SC for distribution over the MBMS sessions.

NOTE: It is implementation specific if the MCData server uses pull or push ingest mode to ingest the file into the BM‑SC over the xMB interface.

###### 7.3.5.3.x.2 File fetching by the MCData server

A file can be fetched by the MCData server from the MCData content server over the MCData-FD-5 reference point using the file URL provided by MCData users. The MCData server, thus, enables via the xMB‑U interface that the file is ingested, either by pull or push, into the BM‑SC for distribution over MBMS.

NOTE 1: The file also becomes available for the case that the MCData server decides to distribute the file over the MB2 interface to MCData users from the target MCData group.

When the MCData server defines a pull ingest mode, the MCData server provides via the xMB‑C interface the resource location from which the BM‑SC will fetch the file as well as other session properties (e.g. file earliest fetch time), as described in 3GPP TS 26.348 [19].

When the MCData server defines a push ingest mode, the MCData server directly ingests into the BM‑SC via the xMB‑U interface the file obtained from the MCData content server. The BM‑SC provides to the MCData server the URL to be used to push the file(s).

NOTE 2: For the push ingest mode, the MCData server is always the functional entity ingesting the file content into the BM‑SC via the xMB‑U interface.

The procedure in figure 7.3.5.3.x.2-1 describes the case where the file to be distributed over MBMS is fetched by the MCData server from the MCData content server.

Pre-conditions:

- The MCData users on the MCData client 1 to n belong to the same MCData group and are already registered and affiliated for receiving MCData service.

- The file to be distributed is uploaded to the MCData content server.

- The BM‑SC has the necessary permissions to fetch a file from the MCData system.



Figure 7.3.5.3.x.2-1: File fetching by the MCData server for file distribution over MBMS

1. The MCData server receives a request from the MCData client 1 to distribute a file to a target MCData group. The MCData file distribution request contains the resource location (i.e. the file URL) in the MCData content server.

2. The MCData server decides to fetch the file from the MCData content server via the MCData-FD-5 reference point.

3. The MCData server creates an MBMS service and session for file delivery using xMB procedures via the xMB‑C interface, as described in 3GPP TS 26.348 [19]. The MCData server indicates, among other session properties, the ingest mode. For the case of pull ingest mode, the MCData server provides the file URL from which the BM‑SC will fetch the file. For the case of push ingest mode, the BM‑SC provides to the MCData server the URL to be used to push the file into the MBMS session.

NOTE 3: Step 3 may also occur before step 2.

4. The MCData server provides to the MCData users from the target MCData group the application signalling related to the MBMS session and the file distribution.

5a. For the case that the file is ingested into the BM‑SC based on the push ingest mode, the MCData server pushes the file to the URL indicated by the BM‑SC.

5b. For the case that the file is ingested into the BM‑SC based on the pull ingest mode, the BM‑SC pulls the file from the provided file URL.

6. The BM‑SC distributes the file over the established MBMS session. When the target MCData clients have activated the reception for that service and are located within the MBMS area coverage, the MCData clients receive the file.

###### 7.3.5.3.x.3 File fetching by the BM‑SC

When the MCData server defines a pull ingest mode, the MCData server can alternatively provide to the BM‑SC the resource location in the MCData content server (i.e. the file URL contained within the received file distribution request). The BM‑SC, thus, will directly fetch the file from the MCData content server.

NOTE 1: In order to the enable that the BM‑SC fetches the file from the MCData content server, the MCData content server supports the xMB‑U interface to the BM‑SC.

NOTE 2: For the case that the file is ingested into the BM‑SC from the MCData content server, only the pull ingest mode is supported. When push ingest mode is required, the procedure is described in clause 7.3.5.3.x.2.

The procedure in figure 7.3.5.3.x.3-1 describes the case where the file to be distributed over MBMS is fetched by the BM‑SC from the MCData content server.

Pre-conditions:

- The MCData users on the MCData client 1 to n belong to the same MCData group and are already registered and affiliated for receiving MCData service.

- The file to be distributed is uploaded to the MCData content server.

- The BM‑SC has the necessary permissions to fetch a file from the MCData system.



Figure 7.3.5.3.x.3-1: File fetching by the BM‑SC for file distribution over MBMS

1. The MCData server receives a request from the MCData client 1 to distribute a file to a target MCData group. The MCData file distribution request contains the resource location (i.e. the file URL) in the MCData content server.

2. The MCData server creates an MBMS service and session for file delivery using xMB procedures via the xMB‑C interface, as described in 3GPP TS 26.348 [19]. The MCData server defines, among other session properties, the ingest mode to pull. The MCData server provides the file URL from which the BM‑SC will fetch the file from the MCData content server.

3. The MCData server provides to the MCData users from the target MCData group the application signalling related to the MBMS session and the file distribution.

4. The BM‑SC fetches the file from the MCData content server via the xMB‑U interface.

5. The BM‑SC distributes the file over the established MBMS session. When the target MCData clients have activated the reception for that service and are located within the MBMS area coverage, the MCData clients receive the file.