**3GPP TSG-SA WG6 Meeting #62 S6-243386**

**Maastricht, Netherlands, 19th – 23rd August 2024 (revision of S6-243309)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** | **0579** | **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:*** | Ad hoc group call procedure towards a migrated MC service user | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Samsung | | | | | | | | | |
| ***Source to TSG:*** | SA6 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FRMCS\_Ph5 | | | | |  | ***Date:*** | | | 2024-08-19 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | B |  | | | | | ***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 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-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | When the MC service user not aware of the migration information of target MC service user originates an ad hoc group call towards migrated MC service user the call should be established in the migrated MC system using MC service ID obtained from the migrated MC system. The existing specification do not have way for establishing ad hoc group call with migrated MC service user initiated using MC service ID assigned by primary MC system of the migrated MC service user and route accordingly to migrated MC system using new MC service ID assigned by the migrated MC system. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | 10.16.6.1: Provides the general discription of the procedure.  10.16.6.2: A Ad hoc group call redirection notify information flow is defined to indicate the call re-direction to MC service server from another MC server and MC service server to call originating MC service user.  10.16.6.3: A detailed procedure considering interconnected MC system is specified. The primary MC system’s MC service is the focus server and manages to invite all the MC service users to call. The partner MC system uses the Ad hoc group call redirection notify information flow to indicate the call to be delivered to another partner MC system to which mc service user is migrated | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | If the ad hoc group call is originated to the MC service users who have migrated to another MC system then call can’t be established with migrated MC service user | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 10.16.6 (new), 10.16.6.1(new), 10.16.6.2, 10(new).16.6.3(new) | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

### 10.16.6 Ad hoc group call procedure towards a migrated MC service user

#### 10.16.6.1 General

The following clauses specify the generic procedure for ad hoc group call towards a migrated MC service user that is utilised by all the MC services (i.e. MCPTT, MCVideo and MCData) in conjunction with the procedures as specified in the respective MC services in 3GPP TS 23.379 [16], 3GPP TS 23.281 [12], and 3GPP TS 23.282 [13].

The ad hoc group calls can be initiated by using the participant list provided by an initiator of the call and the ad hoc group call will be hosted in the primary MC system of the initiator of the ad hoc group call. If one of the requested participant is migrated to a partner MC system then the call should be delivered to the partner MC system to which MC service user has migrated. The primary MC system of the migrated MC service user assists in redirecting the call to the partner MC system using partner MC system assigned MC service ID. The initiator of the call is not aware of the migration information of the requested participants, uses an MC service ID assigned by primary MC system of the migrated MC service user. The MC service server of the both primary and partner MC systems are involved in call redirection to deliver a call appropriately into the MC system.

If one of the requested participant is from an interconnected MC system and has migrated to another partner system, then the call should be delivered to the partner MC system to which participant is migrated. The primary MC system of the migrated MC service user assists in redirecting the ad hoc group call setup request by providing the another partner MC system the assigned MC service ID to the MC system where this ad hoc group call is hosted (focus MC service server of the caller’s primary MC system). The primary MC system of the migrated MC service user receives the ad hoc group call setup request using the primary MC system assigned MC service ID when an initiator of the call not aware of the migration of the MC service user. The ad hoc group call hosting MC service server of the MC system further delivers the call to the migrated MC service user using another partner MC system assigned MC service ID.

#### 10.16.6.2 Information flows

##### 10.16.6.2.1 Ad hoc group call redirection notify

Table 10.16.6.2.1-1 describes the information flow of an ad hoc group call redirection notify, which is sent from the MC service server to MC service server and MC service server to an MC service client initiating an ad hoc group call towards a migrated MC service user.

Table 10.16.6.2-1: Ad hoc group call redirection notify

|  |  |  |
| --- | --- | --- |
| Information element | Status | Description |
| MC service ID | M | The MC service ID of the MC service user initiating an ad hoc group call, i.e., calling party. The MC service ID can either be MCPTT ID, MCVideo ID, or MCData ID. |
| MC service ID | M | The MC service ID of the target MC service user (i.e., called party), which the MC service user has obtained from its primary MC system before migration. The MC service ID can either be MCPTT ID, MCVideo ID, or MCData ID. |
| MC service ID | M | The MC service ID of the target MC service user, which the MC service user has obtained from its migrated MC system after Migration. The MC service ID can either be MCPTT ID, MCVideo ID, or MCData ID. |
| Redirection reason | O | The called MC service user has migrated. |

#### 10.16.6.3 Procedure

Figure 10.16.6.3-1 presents a generic ad hoc group call procedure for the MC service user 1 using MC service client 1 towards a MC service user 2 using MC service client 2, a migrated MC service user 3 using MC service client 3 and a migrated MC service user 4 using MC service client 4, where the MC system A is the primary MC system of MC service user 3 before migration, MC system B is the primary MC system of MC service user 4 before migration, the MC system B is the MC system that the MC service user 3 has migrated and the MC system C is the MC system that the MC service user 4 has migrated.

The procedure is based on the following existing procedures:

- The ad hoc group call setup procedures as described in clause 10.19.3.2.1 of 3GPP TS 23.379 [16], in clause 7.19.3.2.1 of 3GPP TS 23.281 [12], or in clause 7.17.3.2.1 of 3GPP TS 23.282 [13].

Pre-conditions:

- The MC system A, MC system B and MC system C are interconnected MC systems.

- The MC system A is the primary MC system of MC service user 1, MC service user 2 and the MC service user. The MC system B is the MC system that MC service user 3 has migrated.

- The MC system B is the primary MC system of MC service user 4. The MC system C is the MC system that MC service user 4 has migrated.

- The MC service server A is aware that MC service user 3 has migrated and is informed of its MC service ID provided by MC system B, as described in clause 10.6.3.3.

- The MC service server B is aware that MC service user 4 has migrated and is informed of its MC service ID provided by MC system C, as described in clause 10.6.3.3.

- The authorized MC service user 1 at MC service client 1 wants to invite MC service users at MC service client 2, MC service client 3 and MC service client 4 for the ad hoc group call.

- The ad hoc group call is hosted in the MC service server A of the MC system A.



Figure 10.16.6.3-1: Ad hoc group call towards migrated MC service users.

1. The MC service user 1 (at MC service client 1) initiates an ad hoc group call request towards MC service user 2 (at MC service client 2), MC service user 3 (at MC service client 3) who has migrated to MC system B, and MC service user 4 (at MC service client 4) who has migrated to MC system C. The initiator of the ad hoc group call includes the MC service ID of MC service users in an ad hoc group call request, which are obtained from their primary MC system.

2. The MC service server A of the MC system A invites the MC service client 2 to ad hoc group call and successfully establishes the ad hoc group call with the MC service client 2.

3. The MC service server A determine that MC service user 3 which has to be invited for ad hoc group call is migrated to MC system B with a new MC service ID assigned by MC system B.

4. The MC service server A may informs the MC service client 1 that ad hoc group call request towards MC service user 3 is redirected to MC system B (migrated MC system) by sending ad hoc group call redirection notify. The ad hoc group call redirection notify contains the information about MC service ID of the target MC service user 3 assigned by both MC system A and MC system B, and reason for the call redirection as user migration.

5. The MC service server A of the MC system A invites the MC service client 3 to ad hoc group call using MC service ID assigned by the MC system B and successfully establishes the ad hoc group call with the MC service client 3.

6. The MC service server A of the MC system A further initiates an ad hoc group call request towards the MC service client 4 of the MC system B. The ad hoc group call request is routed to the MC service client 4 via the MC service server B of the MC system B.

7. The MC service server B of the MC system B determine that MC service user 3 has to be invited for ad hoc group call is migrated to MC system C with a new MC service ID assigned by MC system C.

8. The MC service server B informs the MC service server A that initiation of ad hoc group call towards the MC service user 4 has migrated and assigned with a new MC service ID by MC system C (migrated MC system) by sending ad hoc group call redirection notify. The ad hoc group call redirection notify contains the information about MC service ID of the target MC service user 4 assigned by both MC system B and MC system C, and reason for the call redirection notify as user migration.

9. The MC service server A may informs the MC service client 1 that ad hoc group call request towards MC service user 4 is redirected to MC system C (migrated MC system) by sending ad hoc group call redirection notify. The ad hoc group call redirection notify contains the information about MC service ID of the target MC service user 4 assigned by both MC system B and MC system C, and reason for the call redirection as user migration.

10. The MC service server A of the MC system A invites the MC service client 4 to ad hoc group call using MC service ID assigned by the MC system C and successfully establishes the ad hoc group call with the MC service client 4.

11. The MC service server A of the MC system A provides an ad hoc group call response to the MC service client 1 upon receiving response to the corresponding ad hoc group call request in step 1. The ad hoc group call response will consist of the success or failure result and/or detailed reason information in case of failure.

12. Upon successful of an ad hoc group call setup, call is established amongst the multiple group members from MC system A, MC system B and MC system C. The media plane and floor control resources are established.

NOTE 1: The migrated MC system can choose to reject the ad hoc group call request originated towards the migrated MC service user based on the local policy.

NOTE 2: When user added to the ad hoc group call, the authorized users (not shown in figure), who are configured to receive the participants information of ad hoc group call, are notified that the MCPTT user joined the MCPTT ad hoc group call.

\* \* \* \* End of changes \* \* \* \*