**3GPP TSG-CT WG1 Meeting #122-eC1-200xxx**

**Electronic meeting, 20-28 February 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
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|  | **24.379** | **CR** | **0552** | **rev** | **1** | **Current version:** | **16.3.0** |  |
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| *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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:***  | Update service authorization procedures to support limiting the number of authorized clients per MCPTT user  |
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| ***Source to WG:*** | Nokia, Nokia Shanghai Bell  |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | MONASTERY2 |  | ***Date:*** | 2020-02-21 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-16 |
|  | *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:*** | Stage 2 specs 3GPP TS 23.379 indicate that the allowed number of successful simultaneous authorizations for clients used by an MCPTT user should be limited. |
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| ***Summary of change:*** | 1)Update the service authorization procedure at the MCPTT server upon reception of SIP REGISTER request2) Update the service authorization procedure at the MCPTT server upon reception of SIP PUBLISH request3)Introduction of new warning message |
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| ***Consequences if not approved:*** | Stage 2 requirement on limiting the allowed number of successful simultaneous authorizations for clients used by an MCPTT user is not supported |
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| ***Clauses affected:*** | 4.4.2, 7.3.2, 7.3.3 |
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|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | 1)Fixed alignment of table2)Editorials3)Clarified that in case of SIP register no response to client is provided as per Figure 5.1.3.2.2-1: MCX User Service Authorization using SIP REGISTER message of TS 33180 . |

### 4.4.2 Warning texts

The text string included in a Warning header field consists of an explanatory text preceded by a 3-digit text code, according to the following format in Table 4.4.2-1.

Table 4.4.2-1 ABNF for the Warning text

warn-text =/ DQUOTE mcptt-warn-code SP mcptt-warn-text DQUOTE

mcptt-warn-code = DIGIT DIGIT DIGIT

mcptt-warn-text = \*( qdtext | quoted-pair )

Table 4.4.2-2 defines the warning texts that are defined for the Warning header field when a Warning header field is included in a response to a SIP INVITE request as specified in subclause 4.4.1.

Table 4.4.2-2: Warning texts defined for the Warning header field

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| --- | --- | --- |
| Code | Explanatory text | Description |
| 100 | function not allowed due to <detailed reason> | The function is not allowed to this user.The <detailed reason> will be either "group definition", "access policy", "local policy", "user authorisation" or "pre-established session not supported", or can be a free text string. |
| 101 | service authorisation failed | The service authorisation of the MCPTT ID against the IMPU failed at the MCPTT server. |
| 102 | too many simultaneous affiliations | The MCPTT user already has N2 maximum number of simultaneous affiliations. |
| 103 | maximum simultaneous MCPTT group calls reached | The number of maximum simultaneous MCPTT group calls supported for the MCPTT user has been exceeded. |
| 104 | isfocus not assigned | A controlling MCPTT function has not been assigned to the MCPTT session. |
| 105 | subscription not allowed in a broadcast group call | Subscription to the conference event package rejected during a group call initiated as a broadcast group call. |
| 106 | user not authorised to join chat group | The MCPTT user is not authorised to join this chat group. |
| 107 | user not authorised to make private calls | The MCPTT user is not authorised to make private calls. |
| 108 | user not authorised to make chat group calls | The MCPTT user is not authorised to make chat group calls. |
| 109 | user not authorised to make prearranged group calls | The MCPTT user is not authorised to make group calls to a prearranged group. |
| 110 | user declined the call invitation | The MCPTT user declined to accept the call. |
| 111 | group call proceeded without all required group members | The required members of the group did not respond within the acknowledged call time, but the call still went ahead. |
| 112 | group call abandoned due to required group members not part of the group session | The group call was abandoned, as the required members of the group did not respond within the acknowledged call time. |
| 113 | group document does not exist | The group document requested from the group management server does not exist. |
| 114 | unable to retrieve group document | The group document exists on the group management server but the MCPTT server was unable to retrieve it. |
| 115 | group is disabled | The group has the <disabled> element set to "true" in the group management server. |
| 116 | user is not part of the MCPTT group | The group exists on the group management server but the requesting user is not part of this group. |
| 117 | the group identity indicated in the request is a prearranged group | The group id that is indicated in the request is for a prearranged group, but did not match the request from the MCPTT user. |
| 118 | the group identity indicated in the request is a chat group | The group id that is indicated in the request is for a chat group, but did not match the request from the MCPTT user. |
| 119 | user is not authorised to initiate the group call | The MCPTT user identified by the MCPTT ID is not authorised to initiate the group call. |
| 120 | user is not affiliated to this group | The MCPTT user is not affiliated to the group. |
| 121 | user is not authorised to join the group call | The MCPTT user identified by the MCPTT ID is not authorised to join the group call. |
| 122 | too many participants | The group call has reached its maximum number of participants. |
| 123 | MCPTT session already exists | Inform the MCPTT user that the group call is currently ongoing.  |
| 124 | maximum number of private calls reached | The maximum number of private calls allowed at the MCPTT server for the MCPTT user has been reached. |
| 125 | user not authorised to make private call with automatic commencement | The MCPTT user is not authorised to make a private call with automatic commencement. |
| 126 | user not authorised to make private call with manual commencement | The MCPTT user is not authorised to make a private call with manual commencement. |
| 127 | user not authorised to be called in private call | The called MCPTT user is not allowed to be part of a private call. |
| 128 | isfocus already assigned | The MCPTT server owning an MCPTT group received a SIP INVITE request destined to the MCPTT group from another MCPTT server already assigned as the controlling MCPTT function and the MCPTT server owning the MCPTT group does not support mutual aid or supports trusted mutual aid but does not authorise trusted mutual aid. |
| 136 | authentication of the MIKEY-SAKKE I\_MESSAGE failed | The MCPTT client's application of the procedures of 3GPP TS 33.180 [78] to authenticate the received I\_MESSAGE fails.  |
| 137 | the indicated group call does not exist | The participating MCPTT function cannot find an ongoing group session associated with the received MCPTT session identity. |
| 138 | subscription of conference events not allowed | The controlling MCPTT function could not allow the MCPTT user to subscribe to the conference event package. |
| 139 | integrity protection check failed | The integrity protection of an XML MIME body failed. |
| 140 | unable to decrypt XML content | The XML content cannot be decrypted. |
| 141 | user unknown to the participating function | The participating function is unable to associate the public user identity with an MCPTT ID. |
| 142 | unable to determine the controlling function | The participating function is unable to determine the controlling function for the group call or private call. |
| 143 | not authorised to force auto answer | The calling user is not authorised to force auto answer on the called user. |
| 144 | user not authorised to call this particular user | The calling user is not authorised to call this particular called user. |
| 145 | unable to determine called party | The participating function was unable to determine the called party from the information received in the SIP request. |
| 146 | T-PF unable to determine the service settings for the called user | The service settings have not been uploaded by the terminating client to the terminating participating server. |
| 147 | user is authorized to initiate a temporary group call | The non-controlling MCPTT function has authorized a request from the controlling MCPTT function to authorize a user to initiate an temporary group session. |
| 148 | MCPTT group is regrouped | The MCPTT group hosted by a non-controlling MCPTT function is part of a temporary group session as the result of the group regroup function. |
| 149 | SIP-INFO request pending | The MCPTT client needs to wait for a SIP-INFO request with specific content, before taking further action. |
| 150 | invalid combinations of data received in MIME body | The MCPTT client included invalid combinations of data in the SIP request. |
| 151 | user not authorised to make a private call call-back request | The MCPTT user is not authorised to make a private call call-back request. |
| 152 | user not authorised to make a private call call-back cancel request | The MCPTT user is not authorised to make a private call call-back cancel request. |
| 153 | user not authorised to call any of the users requested in the first-to-answer call | All users that were invited in the first-to-answer call cannot be involved in a private call with the inviting user. |
| 154 | user not authorised to make ambient listening call | The MCPTT user is not authorised to make an ambient listening call. |
| 155 | user not authorised to change user's selected group | The MCPTT user is not authorised to change the selected group of the targeted user. |
| 156 | user not authorised to originate a first-to-answer call | The MCPTT user is not authorised to make a first-to-answer call. |
| 157 | user not authorised to request a remotely initiated group call | The MCPTT user is not authorised to request a remotely initiated group call. |
| 158 | user not authorised to request a remotely initiated private call | The MCPTT user is not authorised to request a remotely initiated private call. |
| 159 | user not authorised to be called by this originating user | The called user is not authorised to receive a call by this originating user. |
| 160 | user not authorised to request creation of a regroup | The MCPTT user is not authorised to request creation of a regroup. |
| 161 | user not authorised to request removal of a regroup | The MCPTT user is not authorised to request removal of a regroup. |
| 162 | group call abandoned due to required group members not affiliated | The group call was abandoned as the required number of affiliated group members is not met or some required members are not affiliated. |
| qqq | maximum number of service authorizations reached | The number of maximum simultaneous service authorizations for the MCPTT user has been reached. |
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\*\*\*\*\* Next change \*\*\*\*\*

### 7.3.2 SIP REGISTER request for service authorisation

The MCPTT server shall support obtaining service authorization specific information from the SIP REGISTER request sent from the MCPTT client and included in the body of a third-party SIP REGISTER request.

NOTE 1: 3GPP TS 24.229 [4] defines how based on initial filter criteria the SIP REGISTER request sent from the UE is included in the body of the third-party SIP REGISTER request.

Upon receiving a third party SIP REGISTER request with a message/sip MIME body containing the SIP REGISTER request sent from the MCPTT client containing an application/vnd.3gpp.mcptt-info+xml MIME body with an <mcptt-access-token> element and an <mcptt-client-id> element within a message/sip MIME body of the SIP REGISTER request sent from the MCPTT client, the MCPTT server:

1) shall identify the IMS public user identity from the third-party SIP REGISTER request;

2) shall identify the MCPTT ID from the SIP REGISTER request sent from the MCPTT client and included in the message/sip MIME body of the third-party SIP REGISTER request by following the procedures in subclause 7.3.1A;

2a) shall check if the number of maximum simultaneous authorizations supported for the MCPTT user as specified in the <max-simultaneous-authorizations> element of the <anyExt> element contained in the <OnNetwork> element of the MCPTT service configuration document (see the service configuration document in 3GPP TS 24.484 [50]) has been reached. If reached, the MCPTT server shall not continue with the rest of the steps in this subclause;

3) shall perform service authorization for the identified MCPTT ID as described in 3GPP TS 33.180 [78];

4) if service authorization was successful, shall bind the MCPTT ID to the IMS public user identity; and

NOTE 2: The MCPTT server will store the binding MCPTT ID, IMS public user identity and an identifier addressing the MCPTT server in an external database.

5) if a Resource-Share header field with the value "supported" is contained in the "message/sip" MIME body of the third-party REGISTER request, shall bind the MCPTT ID to the identity of the MCPTT UE contained in the "+g.3gpp.registration-token" header field parameter in the Contact header field of the incoming third-party REGISTER request.

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

### 7.3.3 SIP PUBLISH request for service authorisation and service settings

The MCPTT server shall support obtaining service authorization specific information from a SIP PUBLISH request for MCPTT server settings.

Upon receiving a SIP PUBLISH request containing:

1) an Event header field set to the "poc-settings" value;

2) an application/poc-settings+xml MIME body; and

3) an application/vnd.3gpp.mcptt-info+xml MIME body containing an <mcptt-access-token> element and an <mcptt-client-id> element;

the MCPTT server:

1) shall identify the IMS public user identity from the P-Asserted-Identity header field;

2) shall perform the procedures in subclause 7.3.1A;

3) if the procedures in subclause 7.3.1A were not successful shall send a SIP 403 (Forbidden) response towards the MCPTT client with the warning text set to: "140 unable to decrypt XML content " in a Warning header field as specified in subclause 4.4, and not continue with the rest of the steps in this subclause;

3a) shall check if the number of maximum simultaneous authorizations supported for the MCPTT user as specified in the <max-simultaneous-authorizations> element of the <anyExt> element contained in the <OnNetwork> element of the MCPTT service configuration document (see the service configuration document in 3GPP TS 24.484 [50]) has been reached. If reached, the MCPTT server shall send a SIP 486 (Busy Here) response towards the MCPTT client with the warning text set to: "maximum number of service authorizations reached" in a Warning header field as specified in subclause 4.4, and shall not continue with the rest of the steps in this subclause;

4) shall perform service authorization for the identified MCPTT ID as described in 3GPP TS 33.180 [78];

5) if service authorization was successful:

a) shall bind the MCPTT ID to the IMS public user identity; and

b) if a Resource-Share header field with the value "supported" was included in the "message/sip" MIME body of the third-party REGISTER request, shall bind the MCPTT ID to the identity of the MCPTT UE contained in the "+g.3gpp.registration-token" header field parameter in the Contact header field of the third-party REGISTER request that contained this IMS public user identity;

NOTE 1: The MCPTT server will store the binding MCPTT ID, IMS public user identity and an identifier addressing the MCPTT server in an external database.

6) if service authorization was not successful, shall send a SIP 403 (Forbidden) response towards the MCPTT client with the warning text set to: "101 service authorisation failed" in a Warning header field as specified in subclause 4.4, and not continue with the rest of the steps in this subclause;

7) shall process the SIP PUBLISH request according to rules and procedures of IETF RFC 3903 [37] and if processing of the SIP request was not successful, do not continue with the rest of the steps;

8) shall cache the received MCPTT service settings until the MCPTT service settings expiration timer expires;

9) shall send a SIP 200 (OK) response according 3GPP TS 24.229 [4];

10) shall use the Answer-Mode Indication setting in the <am-settings> element of the poc-settings event package as the current Answer-Mode Indication of the MCPTT client.

11) shall download the MCPTT user profile from the MCPTT user database as defined in 3GPP TS 29.283 [73] if not already stored at the MCPTT server and use the <selected-user-profile-index> element of the poc-settings event package if included to identify the active MCPTT user profile for the MCPTT client;

NOTE 2: If the <selected-user-profile-index> element of the poc-settings event package is included then only that MCPTT user profile is needed to be downloaded from the MCPTT user database.

12) if there is no <selected-user-profile-index> element included in the poc-settings event package then if multiple MCPTT user profiles are stored at the MCPTT server or downloaded for the MCPTT user from the MCPTT user database, shall determine the pre-selected MCPTT user profile to be used as the active MCPTT user profile by identifying the MCPTT user profile (see the MCPTT user profile document in 3GPP TS 24.484 [50]) in the collection of MCPTT user profiles that contains a <Pre-selected-indication> element; and

NOTE 3: If only one MCPTT user profile is stored at the MCPTT server or only one MCPTT user profile is downloaded from the MCPTT user database, then by default this MCPTT user profile is the pre-selected MCPTT user profile.

13) if an <ImplicitAffiliations> element is contained in the <OnNetwork> element of the MCPTT user profile document with one or more <entry> elements containing an MCPTT group ID (see the MCPTT user profile document in 3GPP TS 24.484 [50]) for the served MCPTT ID, shall perform implicit affiliation as specified in subclause 9.2.2.2.15