**3GPP TSG-CT3 Meeting #122e C3-223238**

**E-Meeting, 12th – 20th May 2022**

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| *CR-Form-v12.1* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.538** | **CR** | **0002** | **rev** | **-** | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network |  |

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| ***Title:*** | Update of abbreviations and terms | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GMARCH | | | | |  | ***Date:*** | | | 2022-05-04 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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-15 (Release 15) Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | Some abbreviations and terms are not appeared in the text. This CR is proposed to update the abbreviations and terms, capitalize some abbreviations or terms in the text. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Update of abbreviations and terms, capitalize some abbreviations or terms in the text. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The abbreviations and terms are not aligned with the text. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 3.1,3.3,4,10,11.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 \* \* \* \*

3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

For the purposes of the present document, the following terms and its definitions given in 3GPP TS 23.554 [2] shall apply:

**MSGin5G Service**

**MSGin5G message**

**MSGin5G UE**

**MSGin5G Group**

**MSGin5G Client**

**MSGin5G Server**

**Legacy 3GPP Message Gateway**

**Non-3GPP Message Gateway**

**Legacy 3GPP UE**

**Non-3GPP UE**

**Point-to-Point messaging**

**Point-to-Application messaging**

**Application-to-Point messaging**

**Group messaging**

**Broadcast messaging**

**Messaging Topic**

\* \* \* Next Change \* \* \* \*

3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

AS Application Server

BC Broadcast

CAPIF Common API Framework

\* \* \* Next Change \* \* \* \*

4 Overview

The MSGin5G Service is designed and optimized for massive IoT device communication including thing-to-thing communication and person-to-thing communication and provides messaging capability in 5GS with messaging communication models including Point-to-Point, Application-to-Point/Point-to-Application, Group and Broadcast messaging.

3GPP TS 23.554 [2] has specified the application layer architecture, architectural requirements, procedures, information flows and some APIs, in order to support the MSGin5G Service. Various features are defined to ensure the efficient use and deployment of MSGin5G Service, including configuration, registration, message delivery, message aggregation, segmentation and reassembly.

The present document specifies MSGin5G Services offered by MSGin5G Servers and MSGin5G Gateway, and APIs in detail, needed over MSGin5G-2/3/4 interfaces for interworking between MSGin5G Server and Legacy 3GPP UE, Non-3GPP UE or Application Server, with following functionalities need to be supported:

1. Server-side functionality with the sending and receiving of messages to/from Application Servers and/or other MSGin5G Service endpoints on other UEs, provided by MSGin5G Server.

2. Interconnecting two different messaging delivery mechanisms and assure the message integrity between different message delivery mechanisms, provided by Message Gateway.

And the definition of APIs specified in TS 23.554 [2] clause 9 is introduced in present document.

\* \* \* Next Change \* \* \* \*

10 Security

TLS shall be used to support the security communication between the MSGin5G Server and the Application server over MSGin5G-3 interface, and also between MSGin5G Server and the Message Gateway over MSGin5G-2 or MSGin5G-4 interface as specified in 3GPP TS 33.862 [19] and 3GPP TS 33.501 [20]. The access to the MSGin5G Service APIs shall be authorized by means of OAuth2 protocol (see IETF RFC 6749 [21]), based on local configuration, using the "Client Credentials" authorization grant. If OAuth2 is used, a client, prior to consuming services offered by the MSGin5G Service APIs, shall obtain a "token" from the authorization server.

\* \* \* Next Change \* \* \* \*

11.2 Security

When CAPIF is used for external exposure, before invoking the API exposed by the MSGin5G Server, the NF service consumer (e.g. the Application Server) as API invoker shall negotiate the security method (PKI, TLS-PSK or OAUTH2) with CAPIF core function and ensure the MSGin5G Server has enough credential to authenticate the NF service consumer (e.g. the Application Server), see 3GPP TS 29.222 [8], clause 5.6.2.2 and clause 6.2.2.2.

If PKI or TLS-PSK is used as the selected security method between the NF service consumer (e.g. the Application Server) and the MSGin5G Server, upon API invocation, the MSGin5G Server shall retrieve the authorization information from the CAPIF core function as described in 3GPP TS 29.222 [8], clause 5.6.2.4.

As indicated in 3GPP TS 33.122 [22], the access to the MSGin5G APIs may be authorized by means of the OAuth2 protocol (see IETF RFC 6749 [21]), using the "Client Credentials" authorization grant, where the CAPIF core function (see 3GPP TS 29.222 [8]) plays the role of the authorization server.

NOTE 1: In this release, only "Client Credentials" authorization grant is supported.

If OAuth2 is used as the selected security method between the NF service consumer (e.g. the Application Server) and the MSGin5G Server, the the NF service consumer (e.g. the Application Server), prior to consuming services offered by the MSGin5G APIs, shall obtain a "token" from the authorization server, by invoking the Obtain\_Authorization service, as described in 3GPP TS 29.222 [8], clause 5.6.2.3.2.

The MSGin5G APIs do not define any scopes for OAuth2 authorization. It is the MSGin5G Server responsibility to check whether the NF service consumer (e.g. the Application Server) is authorized to use an API based on the "token". Once the MSGin5G Server verifies the "token", it shall check whether the MSGin5G Server identifier in the "token" matches its own published identifier, and whether the API name in the "token" matches its own published API name. If those checks are passed, the NF service consumer (e.g. the Application Server) has full authority to access any resource or operation for the invoked API.

NOTE 2: For aforementioned security methods, the MSGin5G Server needs to apply admission control according to access control policies after performing the authorization checks.

\* \* \* End of Changes \* \* \* \*