**3GPP TSG-CT WG1 Meeting #133-eC1-216709**

**E-meeting, 11-19 November 2021**

**Source: ZTE**

**Title: pCR on MSGin5G registration procedure**

**Spec: 3GPP TS 24.538**

**Agenda item: 17.2.30**

**Document for: Agreement**

**1. Introduction**

Based on the analysis of DP C1-216697, CoAP protocol is preferred for MSGin5G-1 interface. Thus it is proposed to describe registration procedure based on stage2 requirements.

**2. Reason for Change**

Complete the implementation in stage3 for registration procedure.

**3. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.538.

\*\*\*\*\* First change \*\*\*\*\*

6.3.1.1 Procedure at MSGin5G Client

6.3.1.1.1 MSGin5G UE registration

After the MSGin5G UE receives the UE Service ID, in order to register MSGin5G UE to the MSGin5G server, the MSGin5G Client shall send a CoAP POST request message to the MSGin5G Server to according to procedures specified in IETF RFC 7252 [X]. In the CoAP POST request message, the MSGin5G Client:

a) shall set the "T" field in the CoAP header to 0 to indicate acknowledge message required;

b) shall include the MSGin5G Server address in the Option header of the CoAP message and set the Option header to a corresponding value, e.g. if the MSGin5G Server address is a URI, the Uri-Path Option is set to the value of such URI;

c) shall set the "Content\_Format" element to "50" to indicate the format of the CoAP payload is "application/json";

d) includes the following information elements in the CoAP payload in the MSGin5G registration request:

1) the "Message Type" element to indicate a registration message;

2) the "UE Service ID" element to indicate the MSGin5G UE initiating registration procedure;

3) the "UE Credential Information" element to indicate the authentication type and related information;

Editor's note: The details of authentication type and related information is FFS.

4) optionally, the "MSGin5G UE ID" element to indicate the MSGin5G UE hosting the MSGin5G Client and the "MSGin5G Client Ports" element to indicate that the MSGin5G client listens on for device triggers from the MSGin5G Server; and

5) optionally, the "MSGin5G Client Communication Availability" element to informs the MSGin5G Server whether the client has a specific application-level schedule/periodicity to its MSGin5G communications, which may be used in conjunction with UE reachability monitoring to determine whether and when MSGin5G communications are attempted. This element:

i) shall include the "Scheduled communication time" element to indicate the time when the UE becomes available for communication;

ii) shall include the "Communication duration time" element to indicate the duration time of periodic communication;

iii) may include the "Periodic communication indicator" element to identify whether the client communicates periodically or not;

iv) shall include the "Periodic communication interval" element to indicate the interval Time of periodic communication in case of periodic communications if "Periodic communication indicator" element is included;

v) may include the "Data size indication" element to indicate the expected data size to be exchanged during the communication duration; and

vi) may include the "Store and forward option" element to indicate the UE does not request to store and forward services for incoming MSGin5G requests.

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

6.3.1.2 Procedure at MSGin5G Server

6.3.1.2.1 MSGin5G UE registration

Upon reception of registration message carried by the CoAP POST request message, the MSGin5G Server shall verifies the security credentials according to "UE Credential Information" element. After a successful verification, the MSGin5G Server shall store the MSGin5G Client Profile information included in bullet 4) and 5) as specified in subclause 6.3.1.1.1. The MSGin5G Server returns a CoAP acknowledge message. In the CoAP acknowledge message, the MSGin5G Server:

a) shall set the CoAP " Message ID" element and the "Token" element to the same values with those in the CoAP POST request message for registration;

b) may include the MSGin5G Client address in the Option header of the CoAP acknowledge message and set the Option header to a corresponding value, if it is provided in the payload of CoAP POST request message;

c) shall include the following information elements in the CoAP payload in the MSGin5G registration response:

1) the "UE Service ID" element to indicate the MSGin5G UE initiating registration procedure; and

2) the " Registration result" element to indicate whether the registration is success or failure; and

d) shall send CoAP 2.01 (Created) response or CoAP 2.04 (Change) response.

Editor's note: How to verify the security credentials is FFS.

\*\*\*\*\* End of change \*\*\*\*\*