**3GPP TSG-CT WG1 Meeting #136-eC1-223869 r1**

**E-Meeting, 12th – 20th May 2022**

**Source: China Mobile**

**Title: Correction on Constrained device registration to use MSGin5G Gateway UE**

**Spec: 3GPP TS 24.538 v1.1.0**

**Agenda item: 17.2.30**

**Document for: Agreement**

**1. Introduction**

This pCR is proposed to correct the procedure of Constrained UE registration to use MSGin5G Gateway UE.

**2. Reason for Change**

This pCR is proposed to correct the procedure of Constrained UE registration to use MSGin5G Gateway UE.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.538 v1.1.0.

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**Formatting instructions (remove this section after drafting a pCR)**

This sentence uses 'Normal' style from '3gpp\_70.dot' template, which shall be used for most of the text.

- This sentence uses 'B1' style from '3gpp\_70.dot' template, which shall be used for most of the bullet points.

NOTE: This sentence uses 'NO' style from '3gpp\_70.dot' template, which shall be used for all informative notes.

Editor's note: This sentence uses 'Editor's Note' style from '3gpp\_70.dot' template, which shall be used for all editor's notes.

Table x: This is a caption for a table, which uses 'TH' style from '3gpp\_70.dot' template.

Figure x: This is a caption for a figure, which uses 'TF' style from '3gpp\_70.dot' template.

The text within a Table and a Figure cells shall use either 'TAH', 'TAL' or 'TAC' styles from '3gpp\_70.dot' template.

Styles in 3GPP Specifications

|  |  |
| --- | --- |
| Use this style | For this type of element |
| **Heading 1** | Clause (→ if numbered) |
| **Heading n** | Subclause level nIn exceptional cases, for level 6 or beyond, use **Heading 5** if required in contents list or **H6** if not to appear. → |
| **Heading 8** | Annex title for TS |
| **Heading 9** | Annex title for TR |
| **Normal** | Standard paragraph, Definition |
| **EX** | Reference, Example → |
| **EW** | Symbol, Abbreviation, Example continuation in text → |
| **Bn** | List element level n → |
| **FP** | Free paragraph (left justified) |
| **NO** | Note integrated in the text → |
| **NW** | Note continuation in text → |
| **NF** | Note in figure → |
| **TAN** | Note in table → |
| **TH** | Table title, Figures |
| **TAH** | Heading within table |
| **TAC** | Centred text within table |
| **TAL** | Left justified text within table |
| **TAR** | Right justified text within table |
| **TF** | Figure title |
| **TT** | Contents list title |
| **PL** | Programming language |
| **EQ** | Equation |
| **Header** | Header (portrait and landscape pages) |
| → use "tab" between "item/number" and "text".EXAMPLE: The "tab" is preceding this example text. |

**Please do not create new styles!**

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\* \* \* First Change \* \* \* \*

### 6.3.2 Constrained device registration to use MSGin5G Gateway UE

#### 6.3.2.1 Procedure at Gateway MSGin5G UE

##### 6.3.2.1.1 Constrained device registration to use MSGin5G Gateway UE

Upon reception of registration request from the application client on the Constrained UE, the MSGin5G Gateway UE decides whether to accept the registration request based on local condition.

If the registration is accepted by the MSGin5G Gateway UE, the MSGin5G Client on the MSGin5G Gateway UE:

a) stores Layer-2 ID and Application ID included in the registration request from the Constrained UE;

NOTE: Based on the connection mode, e.g. L2 connection or L3 connection, the MSGin5G Gateway UE may allocate a specified MAC address or UDP port for exchanging information between the MSGin5G Gateway UE and the Constrained UE. The transport mechanism is based on the legacy transport protocol.

b) allocates a Registration ID for the Constrained UE; and

c) constructs the registration response and sends it to the application client on the Constrained UE. The registration response shall include:

1) the Registration Result indicates the registration is accepted by the MSGin5G Gateway UE; and

2) the Registration ID allocated by the MSGin5G Gateway UE.

If the registration is not accepted by the MSGin5G Gateway UE, the MSGin5G Client on the MSGin5G Gateway UE constructs the registration response and sends it to the application client on the Constrained UE. The registration response shall include:

a) the Registration Result indicating the registration is not accepted by the MSGin5G Gateway UE; and

b) the Failure Reason indicating an appropriate reason why the registration request is rejected by the MSGin5G Gateway UE.

##### 6.3.2.1.2 Constrained device de-registration to use MSGin5G Gateway UE

Upon reception of de-registration request from the application client on the Constrained UE, the MSGin5G Gateway UE:

a) removes the mapping between Application ID and Layer-2 ID of the UE-2 based on the Registration ID included in the de-registration request; and

b) constructs the de-registration response including:

1) the De-registration Result indicating whether the de-registration is accepted or not;

2) the Registration ID included in the de-registration request, if the de-registration is accepted by the MSGin5G Gateway UE; and

3) the Failure Reason indicating an appropriate cause indicating why the de-registration request is rejected by the MSGin5G Gateway UE, if the de-registration is not accepted by the MSGin5G Gateway UE.

NOTE: Based on the connection mode, e.g. L2 connection or L3 connection, the MSGin5G Gateway UE may allocate a specified MAC address or UDP port for exchanging information between the MSGin5G Gateway UE and the Constrained UE. The transport mechanism is based on the legacy transport protocol.

#### 6.3.2.2 Procedure at Constrained device

##### 6.3.2.2.1 Constrained device registration to use MSGin5G Gateway UE

In order to register Constrained UE to the MSGin5G Gateway UE, the Application Client on the Constrained UE sends a registration request to the MSGin5G Client on the MSGin5G Gateway UE. The registration request shall include:

a) the "Layer-2 ID" to indicate the Layer-2 identity of the Constrained UE;

b) the "Application ID" to indicate the Application Client on the Constrained UE initiating registration; and

c) the "Credential information" to indicate the credential information of the Constrained UE .

NOTE: If a specified MAC address or UDP port is configured for exchanging information between the MSGin5G Gateway UE and the Constrained UE, the Constrained UE shall send the registration request to the specified MAC address or UDP port.

##### 6.3.2.2.2 Constrained device de-registration to use MSGin5G Gateway UE

In order to de-register Constrained UE to the MSGin5G Gateway UE, the Application Client on the Constrained UE sends a de-registration request to the MSGin5G Client on the MSGin5G Gateway UE. The de-registration request shall include the "Registration ID" which has been allocated by the MSGin5G Gateway UE during the registration procedure.

NOTE: If a specified MAC address or UDP port is configured for exchanging information between the MSGin5G Gateway UE and the Constrained UE, the Constrained UE shall send the de-registration request to the specified MAC address or UDP port.