**3GPP TSG-CT WG1 Meeting #141eC1-232556**

**Online 17– 21 April 2023**

**Source: vivo**

**Title: PIN Registration to PIN server**

**Spec: 3GPP TS 24.583 v0.0.0**

**Agenda item: 18.2.26**

**Document for: Agreement**

**1. Reason for Change**

The PIN peer (including PEMC, PEGC, and PINE) should have a registration procedure in PIN server before consuming the certain PIN service. During the PINE registration procedure, the PIN server is responsible for the authorization, and provides the PIN client ID of PIN peer.

The PIN Registration to PIN server procedure is specified in clause 8.4 of TS 23.542 v0.2.0

**2. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.583 v0.0.0.

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

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 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 TR 21.905 [1].

MIME Multipurpose Internet Mail Extensions

URI Uniform Resource Identifier

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

## 5.3 PIN Registration to PIN server

### 5.3.1 General

The purpose of PIN Registration to PIN server procedure is to register to PIN server before consuming a certain PIN service for a PIN peer.

The PIN Registration to PIN server procedure is different for different PIN peers:

a) for the PEMC, the PEMC directly registers to the PIN server. The PIN server allocates the PIN client ID to this PINE and hence the PINE receives the role of being PEMC in a PIN;

b) for PEGC, the following procedures are supported:

1) the PEGC directly registers to the PIN server. The PIN server allocates the PIN client ID to this PEGC; and

2) the PEMC substitutes the PINE or the PEGC to register to PIN server. The PIN server allocates the PIN client ID to this PINE; and

c) for PINE, the following procedures are supported:

1) the PINE registers to the PIN server via the PEGC. The PIN server allocates the PIN client ID to this PINE; and

2) the PEMC substitutes the PINE or the PEGC to register to PIN server. The PIN server allocates the PIN client ID to this PINE.

The following procedures are defined for PIN Registration to PIN server:

a) PIN registration to PIN server as a PEMC as specified in clause 5.3.2;

b) PIN registration to PIN server as a PEGC as specified in clause 5.3.3; and

c) PIN registration to PIN server as a PINE as specified in clause 5.3.4.

### 5.3.2 PIN registration to PIN server as a PEMC

#### 5.3.2.1 PIN registration to PIN server as a PEMC initiation by the PINE

The PINE is authorized to initiate a PIN registration to PIN server as a PEMC initiation if:

a) the UE identifier is available in the PINE;

b) the endpoint information of PIN server is available in the PINE; and

c) the PINE has been authorized to communicate with the PIN server;

otherwise, the PINE is not authorized to perform the PIN registration to PIN server as a PEMC initiation.

When the PINE is on demand to register to the PIN server, if the PINE is authorized to initiate a PIN registration to PIN server as a PEMC initiation, then the PINE shall generate an HTTP POST request according to procedures as specified in IETF RFC 7231 [X]. In the HTTP POST request, the PEAE-C:

a) shall set the Request-URI to the URI of PIN server;

b) shall include a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

c) shall include an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-request-pemc> element in the <pinapp-info> root element:

1) shall include a <ue-id> element set to the identity of the PINE (i.e. GPSI);

2) shall include a <security-credentials> element set to the security credentials resulting from a successful authorization for a PIN service;

3) shall include a <pin-id> element set to the identifier of the PIN that the PINE intends to register as PEMC;

3) may include a <mac-address> element set to the MAC address of the PINE;

4) may include a <vendor-name> element set to the vendor’s name of the PINE;

5) may include a <device-description> element set to the description of the PINE;

6) may include a <pine-address> element set to the IP address of the PINE if available in the PINE; and

7) may include a <role-precedence> element set to primary or secondary PEMC that PINE is intends to be assigned with.

The PEAE-C shall send the generated HTTP POST request towards the PAE-S according to IETF RFC 7231 [X].

Upon reception of an HTTP POST request message containing:

a) a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

b) an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-request-pemc> element in the <pinapp-info> root element,

the PIN server shall check whether the PINE identified by the GPSI is authorized to be a PEMC of a PIN.

#### 5.3.2.2 PIN registration to PIN server as a PEMC accepted by the PIN server

If the PINE identified by the GPSI is authorized to be a PEMC of a PIN, PAE-S shall:

a) generate an HTTP 200 (OK) response according to IETF RFC 7231 [X]. In the HTTP 200 (OK) response message, the PMAE-C:

1) shall include a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

2) shall include an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-accept-pemc> element in the <pinapp-info> root element:

i) shall include a <pin-client-id> element set to the assigned PIN client ID of the PINE; and

ii) may include a <role-precedence> element set to the assigned role precedence of the PINE as the role of PEMC. In case if the PIN has already been created by other PEMC, the PINE is assigned to the secondary PEMC irrespective of the role precedence requested by the PINE; and

b) send the HTTP 200 (OK) response towards the PEAE-C.

#### 5.3.2.3 PIN registration to PIN server as a PEMC completion by the PINE

Upon reception of an HTTP 200 (OK) response message containing:

a) a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

b) an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-accept-pemc> element in the <pinapp-info> root element,

the PEAE-C shall store the assigned PIN client ID and the assigned role precedence of PEMC (if available), and consider the PIN registration to PIN server as a PEMC is complete. From this time onward, the PINE acts as the PEMC in the PIN identified by the requested PIN ID.

#### 5.3.2.4 PIN registration to PIN server as a PEMC not accepted by the PIN server

If the PINE identified by the GPSI is not authorized to be a PEMC of a PIN, PAE-S shall:

a) generate an HTTP 200 (OK) response according to IETF RFC 7231 [X]. In the HTTP 200 (OK) response message, the PMAE-C:

1) shall include a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

2) shall include an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-reject-pemc> element in the <pinapp-info> root element:

i) shall include a <cause> element set to an appropriate cause for PIN registration to PIN server as a PEMC failure; and

b) send the HTTP 200 (OK) response towards the PEAE-C.

Upon reception of an HTTP 200 (OK) response message containing:

a) a Content-Type header field set to "application/vnd.3gpp.pinapp-info+xml"; and

b) an application/vnd.3gpp.pinapp-info+xml MIME body with a <registration-reject-pemc> element in the <pinapp-info> root element,

the PEAE-C shall consider the PIN registration to PIN server as a PEMC is rejected by the PIN server.

### 5.3.3 PIN registration to PIN server as a PEGC

Editor's note: The PIN registration to PIN server as a PEGC is FFS.

### 5.3.4 PIN registration to PIN server as a PINE

Editor's note: The PIN registration to PIN server as a PINE is FFS.\* \* \* End of Changes \* \* \* \*