**3GPP TSG-CT WG1 Meeting #141eC1-232555**

**Online 17– 21 April 2023**

**Source: vivo**

**Title: PIN server discovery**

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

**Agenda item: 18.2.26**

**Document for: Agreement**

**1. Reason for Change**

Some of the PIN management procedures need the PIN server to help. So, the PINE should receive the PIN server endpoint address first and then trigger the other procedures, e.g. the PIN creation procedure.

The PIN server discovery procedure is specified in clause 8.3 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 \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[X] IETF RFC 7231: "Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content".

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

## 3.2 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].

FQDN Fully Qualified Domain Name

GPSI Generic Public Subscription Identifier

URI Uniform Resource Identifier

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

## 5.2 PIN server discovery

### 5.2.1 General

The purpose of PIN server discovery procedure is to receive one or more endpoint information (e.g. URI, FQDN, IP address, etc.) of PIN server for a PINE.

The following procedures are defined for PIN server discovery:

a) static PIN server discovery as specified in clause 5.2.2; and

b) PIN server discovery via PEGC as specified in clause 5.2.3.

### 5.2.2 Static PIN server discovery

For static PIN server discovery, a PINE can discover a PIN server by one or more of the following:

a) endpoint information that is pre-configured in PINE;

b) endpoint information that is pre-configured information in its client (i.e. PEAE-C);

c) input of the user; and

d) derived from HPLMN identifier for non-roaming scenario or from VPLMN identifier for roaming scenario.

### 5.2.3 PIN server discovery via PEGC

#### 5.2.3.1 PIN server discovery via PEGC initiation

The PINE is authorized to initiate a client procedure for PIN server discovery initiation if:

a) the PINE has an application layer connection with PEGC (e.g. via WiFi, Bluetooth, etc.);

b) the PINE has open access to PEGC via the application layer connection (e.g. with no username or password); and

c) the UE identifier or PIN client ID is available in the PINE;

otherwise, the PINE is not authorized to perform the client procedure for PIN server discovery initiation.

When the PINE needs to receive one or more endpoint information of PIN server, if the PINE is authorized to initiate a PIN server discovery 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 corresponding to the PEGC;

NOTE: How to obtain the URI corresponding to the PEGC is left to UE implementation.

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 <server-discovery-request> 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) may include a <mac-address> element set to the MAC address of the PINE; and

3) may include a <ue-location> element set to the location information of the PINE.

The PEAE-C shall send the generated HTTP POST request towards the PGAE-C 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 <server-discovery-request> element in the <pinapp-info> root element

the PGAE-C shall:

a) if the endpoint information of PIN server is available in the PEGC, the PGAE-C shall generate an HTTP 200 (OK) response according to IETF RFC 7231 [X] and send the HTTP 200 (OK) response towards the PEAE-C. In the HTTP 200 (OK) response message, the PGAE-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 <server-discovery-response> element in the <pinapp-info> root element:

i) shall include a <endpoint-information-content> element set to the endpoint information of PIN server; and

b) else, if the endpoint information of PIN server is not available in PEGC, the PGAE-C shall send the HTTP POST request message received from PEAE-C to PMAE-C directly to request the endpoint information of PIN serve from the PEMC.

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 <server-discovery-request> element in the <pinapp-info> root element,

the PMAE-C 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 <server-discovery-response> element in the <pinapp-info> root element:

i) shall include a <endpoint-information-content> element set to the endpoint information of PIN server; and

b) send the HTTP 200 (OK) response towards the PGAE-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 <server-discovery-response> element in the <pinapp-info> root element,

the PGAE-C shall send the HTTP 200 (OK) response message received from PMAE-C to PEAE-C directly to deliver the endpoint information of PIN server towards PINE.

#### 5.2.3.2 PIN server discovery via PEGC completion

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 <server-discovery-response> element in the <pinapp-info> root element,

the PEAE-C shall store the endpoint information of PIN server and consider the client procedure for PIN server discovery via PEGC is complete.

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