**3GPP TSG-CT WG1 Meeting #146C1-240abc**

**Online, 22– 26 January 2024**

**Source: Huawei, HiSilicon**

**Title: Pseudo-CR on CoAP procedures for the SEALDD enabled signalling transmission connection establishment procedure**

**Spec: 3GPP TS 24.543 v1.0.0**

**Agenda item: 18.2.16**

**Document for: Agreement**

**1. Reason for Change**

The current version of the specifications contains editor’s notes about the specification of the CoAP client and server procedures for the SEALDD enabled signalling transmission connection establishment procedure. Those editor’s notes need to be resolved.

**2. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.543 v1.0.0.

**3. Revision history**

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

#### 7.2.2.3 SDDM client CoAP procedure

In order to request an SDDM regular transmission connection establishment to the SDDM-S, the SDDM-C shall send a CoAP POST request message to the SDDM-S according to procedures specified in IETF RFC 7252 [13]. In the CoAP POST request, the SDDM-C:

a) shall include a CoAP URI set to the URI corresponding to the identity of the SDDM-S as specified in clause A.3.1.1 with;

1) the "apiRoot" set to the SDDM-S URI; and

b) shall include Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor";

c) shall include a "EstablishmentRequest" object:

1) shall include a "requestorId" attribute set to "sealddclient";

2) shall include a "sealddFlowId" attribute set to the identity of the SDDM flow used by the SDDM-C and SDDM-S to identify the application traffic;

3) shall include a "serverId" attribute set to the information of the VAL server;

4) shall include an "endpoint-id" attribute set to the information of the endpoint of the selected VAL server to which the SDMM regular transmission connection establishment request has to be sent;

5) may include a "valServiceId" attribute set to the VAL service identity of the vertical application;

6) may include a "userPlaneAddress" attribute specifying the identity of the IP address of the traffic;

7) may include a"portNumber" attribute specifying the identity of the port number of the traffic;

8) may include a "url" attribute specifying the address of a given unique resource on the Web for the traffic;

9) may include a "transportLayerProtocol" attribute specifying the transport layer protocol for the traffic; and

10) may include a "valUserId" attribute set to the identity of the VAL user or the identity of the SDDM-C acting as the VAL UE and performing the request; and

c) shall send the request protected with the relevant ACE profile (OSCORE profile or DTLS profile) as described in 3GPP TS 24.547 [7].

Upon receiving a CoAP POST request where the CoAP URI of the CoAP POST request identifies the establishment resource as specified in Annex A, and containing:

a) a Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor", and

b) an "EstablishmentRequest" object;

the SDDM-C shall generate a CoAP POST response according to IETF RFC 7252 [13]. In the CoAP POST response message, the SDDM-C:

a) shall include a Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor";

b) shall attempt to create the SDDM connection resource pointed at by the CoAP URI with the content of "EstablishmentRequest" object received in the request and:

1) if successfully created, shall include a "EstablishmentResponse" object in the CoAP POST 2.01 (Created) response message;

i) shall include a "result" attribute set to "success"; and

ii) may include a "userPlaneAddress" attribute specifying the identity of the IP address of the traffic;

iii) may include a "portNumber" attribute specifying the identity of the port number of the traffic;

iv) may include a "url" attribute specifying the address of a given unique resource on the Web for the traffic; and

v) may include a "transportLayerProtocol" attribute specifying the transport layer protocol for the traffic; or

2) otherwise, shall include a "EstablishmentResponse" object with a "result" attribute set to "failure" and a "cause" attribute specifying the cause of the failure of the operation, e.g. VAL client error in the CoAP POST response; and

c) shall send the CoAP POST response towards the SDDM-S.

Upon reception of a CoAP POST request where the CoAP URI of the request identifies the QoS Sessions resource URI according to the resource definition in clause A.2.1.2.2.2, the SNRM-S:

a) shall determine the identity of the sender of the received CoAP POST request as specified in clause 6.2.1.2, and:

1) if the identity of the sender of the received CoAP POST request is not authorized to create the QoS session, shall respond with a 4.03 (Forbidden) response to the CoAP POST request and skip rest of the steps;

b) shall support handling a CoAP POST request from a SNRM-C according to procedures specified in IETF RFC 7252  [23]; and

c) shall create a new Individual QoS Session resource and for each VAL UE in the list of participants shall create a new Individual Session Participant resource and shall return a CoAP 2.01 (Created) response with the "QosSession" object including its resource URI in "resUri" attribute, and optionally a reporting configuration in "reportConf" attribute.

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

#### 7.2.2.4 SDDM server CoAP procedure

Upon receiving a CoAP POST request where the CoAP URI of the CoAP POST request identifies the establishment resource as specified in Annex A.4.1.1, and containing:

a) a Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor", and

b) a "EstablishmentRequest" object;

the SDDM-S shall generate a CoAP POST response according to IETF RFC 7252 [13]. In the CoAP POST response message, the SDDM-S:

a) shall include a Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor";

b) shall attempt to create the SDDM connection resource pointed at by the CoAP URI with the content of "EstablishmentRequest" object received in the request and:

1) if successfully created, shall include an "EstablishmentResponse" object in the CoAP POST 2.01 (Created) response message;

i) shall include a "result" attribute set to "success"; and

ii) may include a "userPlaneAddress" attribute specifying the identity of the IP address of the traffic;

iii) may include a "portNumber" attribute specifying the identity of the port number of the traffic;

iv) may include a "url" attribute specifying the address of a given unique resource on the Web for the traffic; and

v) may include a "transportLayerProtocol" attribute specifying the transport layer protocol for the traffic; or

2) otherwise, shall include an "EstablishmentResponse" object with a "result" attribute set to "failure" and a "cause" attribute specifying the cause of the failure of the operation, e.g. VAL client error in the CoAP POST response; and

c) shall send the CoAP 2.05 (Content) response towards the SDDM-C.

In order to request an SDDM regular transmission connection establishment to the SDDM-C, the SDDM-S shall send a CoAP POST request message to the SDDM-C according to procedures specified in IETF RFC 7252 [13]. In the CoAP POST request, the SDDM-S:

a) shall include a CoAP URI set to the URI corresponding to the identity of the SDDM-C as specified in clause A with;

1) the "apiRoot" set to the SDDM-C URI; and

b) shall include Content-Format option set to "application/vnd.3gpp.seal-data-delivery-info+cbor";

c) shall include an "EstablishmentRequest" object:

1) shall include a "requestorId" attribute set to "sealddserver";

2) shall include a "sealddFlowId" attribute set to the identity of the SDDM flow used by the SDDM-C and SDDM-S to identify the application traffic;

3) shall include an "endpointId" attribute set to the information of the endpoint of the selected VAL server to which the SDMM regular transmission connection establishment request has to be sent;

4) shall include a "sealddCommunicationLifetime" attribute set to the information of the data delivery communication lifetime;

5) may include a "valServiceId" attribute set to the VAL service identity of the vertical application;

6) may include a "userPlaneAddress" attribute specifying the identity of the IP address of the traffic;

7) may include a"portNumber" attribute specifying the identity of the port number of the traffic;

8) may include a "url" attribute specifying the address of a given unique resource on the Web for the traffic;

9) may include a "transportLayerProtocol" attribute specifying the transport layer protocol for the traffic; and

10) may include a "valUserId" attribute set to the identity of the VAL user or the identity of the SDDM-C acting as the VAL UE and performing the request; and

c) shall send the request protected with the relevant ACE profile (OSCORE profile or DTLS profile) as described in 3GPP TS 24.547 [7].

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