**3GPP TSG-CT3 Meeting #119bis-e C3-220242**

**E-Meeting, 17th – 21st January 2022**

**Source: Huawei, HiSilicon**

**Title: The definition of MSGG\_N3GDelivery API**

**Spec: 3GPP TS 29.538 v0.2.0**

**Agenda item: 17.34**

**Document for: Approval**

**1. Introduction**

This pCR is to propose the N3GDelivery API part of TS 29.538.

**2. Reason for Change**

N3GDelivery API are necessary.for specification in TS 29.538.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 29.538 v0.2.0.

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

9.2 MSGG\_N3GDelivery API

9.2.1 API URI

The MSGG\_N3GDelivery service shall use the MSGG\_N3GDelivery API, The MSGG\_N3GDelivery API corresponding to Mn3g APIs as defined in in 3GPP TS 23.554 [2].

The request URIs used in HTTP requests from the MSGin5G Server towards the Non-3GPP Message Gateway shall have the Resource URI structure as defined in clause 7.5 with the following clarifications:

- The <apiName>shall be "msgg\_n3gdelivery".

- The <apiVersion> shall be "v1".

- The <apiSpecificResourceUriPart> shall be set as described in clause 9.2.3.

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

9.2.2 Resources

None.

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

9.2.3 Custom Operations without associated resources

#### 9.2.3.1 Overview

The structure of the custom operation URIs of the MSGG\_N3GDelivery service is shown in Figure 9.2.3.1-1.



**Figure 9.2.3.1-1: Custom operation URI structure of the MSGG\_N3GDelivery API**

Table 9.2.3.1-1 provides an overview of the custom operations and applicable HTTP methods.

**Table 9.2.3.1-1: Custom operations without associated resources**

|  |  |  |
| --- | --- | --- |
| **Custom operation URI** | **Mapped HTTP method** | **Description** |
| {apiRoot}/msgg-n3gdelivery/<apiVersion>/deliver-message | POST | Request of MSGin5G Server to deliver message to a given Non-3GPP Message Gateway |
| {apiRoot}/msgg-n3gdelivery/<apiVersion>/deliver-report | POST | Request of MSGin5G Server to deliver status report to a given Non-3GPP Message Gateway |

9.2.3.2 Operation: deliver-message

9.2.3.2.1 Description

This operation is used by the MSGin5G Server to deliver message to a given Non-3GPP Message Gateway.

9.2.3.2.2 Operation Definition

This operation shall support the response data structures and response codes specified in table 9.2.3.2.2-1 and table 9.2.3.2.2-2.

**Table 9.2.3.2.2-1: Data structures supported by the POST Request Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Description** |
| N3gMessageDelivery | M | 1 | Represents the data to be used for MSGin5G Server to deliver message. |

**Table 9.2.3.2.2-2: Data structures supported by the POST Response Body on this resource**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Response**  **codes** | **Description** |
| n/a |  |  | 204 No Content | The Message is Delivered successfully. |
| NOTE: The manadatory HTTP error status code for the POST method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply. | | | | |

9.2.3.3 Operation: deliver-report

9.2.3.3.1 Description

This operation is used by the MSGin5G Server to deliver status report to a given Non-3GPP Message Gateway.

9.2.3.3.2 Operation Definition

This operation shall support the response data structures and response codes specified in table 9.2.3.3.2-1 and table 9.2.3.3.2-2.

**Table 9.2.3.3.2-1: Data structures supported by the POST Request Body on this resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Description** |
| DeliveryStatusReport | M | 1 | Represents the data to be used for MSGin5G Server to deliver status report. |

**Table 9.2.3.3.2-2: Data structures supported by the POST Response Body on this resource**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Data type** | **P** | **Cardinality** | **Response**  **codes** | **Description** |
| n/a |  |  | 204 No Content | The status report is Delivered successfully. |
| NOTE: The manadatory HTTP error status code for the POST method listed in Table 5.2.7.1-1 of 3GPP TS 29.500 [4] also apply. | | | | |

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

9.2.4 Notifications

None.

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

9.2.5 Data Model

9.2.5.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 7.2 apply to this API. Table 9.2.5.1-1 specifies the data types defined specifically for the MSGG\_N3GDelivery API service.

**Table 9.2.5.1-1: MSGG\_N3GDelivery API specific Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Section defined** | **Description** | **Applicability** |
| N3gMessageDelivery | 9.2.5.2.2 | Information within message delivery request. |  |

Table 9.2.5.1-2 specifies data types re-used by the MSGG\_N3GDelivery API service.

**Table 9.2.5.1-2: Re-used Data Types**

|  |  |  |  |
| --- | --- | --- | --- |
| **Data type** | **Reference** | **Comments** | **Applicability** |
| MessageSegmentPapameters | 8.2.5.2.5 | Contains the message segment information of the message. |  |
| Address | 9.1.5.2.3 | The data type of the oriAddr and destAddr. |  |

9.2.5.2 Structured data types

9.2.5.2.1 Introduction

9.2.5.2.2 Type:N3gMessageDelivery

**Table 9.2.5.2.2-1: Definition of type N3gMessageDelivery**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Attribute name** | **Data type** | **P** | **Cardinality** | **Description** | **Applicability** |
| oriAddr | Address | M | 1 | The oriAddr is the service identity of the originating MSGin5G Client or the originating Application Server.  This IE is copied from the associated inbound message. |  |
| destAddr | Address | M | 1 | The destAddr is the service identity of the receiving entity. The receiving entity can only be Non-3GPP UE in this API. |  |
| appId | string | O | 0..1 | Identifies the application(s) for which the payload is intended.  This list of Application IDs IE is required when the message is sent to one or multiple Application Clients served by same MSGin5G Client. |  |
| msgId | string | M | 1 | Unique identifier of this message.  This IE is copied from the associated inbound message request |  |
| isDelivStatReq | boolean | O | 0..1 | Indicates if delivery acknowledgement from the recipient is requested.  This IE is copied from the associated inbound message. |  |
| payload | string | O | 0..1 | Payload of the message.  This IE is copied from the associated inbound message. |  |
| isSegmented | boolean | O | 0..1 | Indicates this message is part of a segmented message. |  |
| SegParams | MessageSegmentPapameters | O | 0..1 | The message segment parameters.  This IE shall be included only if the value of the messageIsSegmented IE indicates that message Segment services are requested. |  |

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

9.2.6 Error Handling

General error responses will be defined in clause 7.7.

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

9.2.7 Feature negotiation

General feature negotiation procedures are defined in clause 7.8. Table 9.2.7-1 lists the supported features for MSGG\_N3GDelivery API.

**Table 9.2.7-1: Supported Features**

|  |  |  |
| --- | --- | --- |
| **Feature number** | **Feature Name** | **Description** |
|  |  |  |

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