**3GPP TSG-CT WG1 Meeting #146C1-240305**

**Online , 22– 26 January 2024**

**Source: Lenovo**

**Title: Service description and operations for edge load data collection**

**Spec: 3GPP TS 24.559V0.3.1**

**Agenda item: 18.2.29**

**Document for: Agreement**

**1. Introduction**

<Introduction part (optional)>

**2. Reason for Change**

Detailed service description and service operations for edge load data collection.

Added deletion operation of the ADAE server subscription to the event of edge load data collection to the ADAE client.

Added missing reference number.

Other miscellaneous corrections for edge load data collection elated text.

**3. Conclusions**

<Conclusion part (optional)>

**4. Proposal**

It is proposed to agree the following changes to 3GPP TS 24.559V0.3.1.

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

## 6.4 Edge load data collection

### 6.4.1 Service description

The ADAE\_ServiceConfiguration API, as defined 3GPP TS 23.436 [3], allows the ADAES via ADAE-UU reference point to subscribe to ADAEC to the event of the edge load data collection.

### 6.4.2 Service Operations

#### 6.4.2.1 Introduction

The service operation defined for ADAE\_ServiceConfiguration API for edge load data collection is shown in the table 6.4.2.1-1.

Table 6.4.2.1-1: Operations for edge load data collection

|  |  |  |
| --- | --- | --- |
| Service operation name | Description | Initiated by |
| Subscribe\_Edge\_Load\_Data\_Collection | This service operation is used by ADAES to subscribe to the event of the edge load data collection. | ADAES |
| Notify\_Edge\_Load\_Data\_Collection | This service operation is used by ADAEC to notify about the edge load data collection. | ADAEC |
| Unsubscribe\_Edge\_Load\_Data\_Collection | This service operation is used by ADAES to unsubscribe from the edge load data collection. | ADAES |

#### 6.4.2.2 Subscribe\_Edge\_Load\_Data\_Collection

##### 6.4.2.2.1 General

This service operation is used by the ADAES for edge load data collection event subscription to the ADAEC.

##### 6.4.2.2.2 Subscribing to edge load data collection event using Subscribe\_Edge\_Load\_Data\_Collection service operation

To subscribe to edge load data collection event, the ADAES shall send an HTTP POST request with a Request-URI according to the pattern "{apiRoot}/adae-sc/<apiVersion>/edge-load" and with a body containing data type EdgeSubs as defined in clause 7.10.7.4.2.2 of 3GPP TS 29.549 [7].

Upon receipt of the HTTP POST request, the ADAEC shall:

a) verify the identity of the ADAES and determine if the ADAES is authorized to subscribe to the edge load data collection event; and

b) if the ADAES:

1) is not authorized, the ADAEC shall respond to the ADAES with an appropriate error status code; or

2) is authorized, the ADAEC shall create a new "Individual edge load event subscription" resource and respond to the ADAES with an HTTP "201 Created" status code, including a Location header field containing the URI for the created "Individual edge load event subscription" and the response body including the EdgeSubs data structure containing a representation of the created resource as defined in clause 7.1.3.

#### 6.4.2.3 Notify\_Edge\_Load\_Data\_Collection

##### 6.4.2.3.1 General

This service operation is used by the ADAEC to send notification to the ADAES with the edge load data collection event subscription to the ADAEC.

##### 6.4.2.3.2 Notifying edge load data collection event using Notify\_Edge\_Load\_Data\_Collection service operation

To notify edge load data collection event, the ADAEC shall send an HTTP POST request with a Request-URI according to the pattern "{notifUri}" and with a body containing data type EdgeNotifas defined in clause 7.10.7.4.2.3 of 3GPP TS 29.549 [7];

Upon receipt of the HTTP POST request, the ADAES shall respond to the ADAEC with:

a) if the request is successfully processed, a "204 No Content" status code and process the event notification; or

b) if errors occur when processing the request, an appropriate error response as specified in clause 7.1.6.

#### 6.4.2.4 Unsubscribe\_Edge\_Load\_Data\_Collection

##### 6.4.2.4.1 General

This service operation is used by the ADAES to unsubscribe from the edge load data collection event.

##### 6.4.2.4.2 Unsubscribing from edge load data collection event using Unsubscribe\_Edge\_Load\_Data\_Collection service operation

To unsubscribe from edge load data collection event, the ADAES shall send an HTTP DELETE request to the resource representing the event in the ADAES as specified in clause 7.1.3.6.

Upon receiving the HTTP DELETE request:

a) the ADAEC shall verify the identity of the ADAES and check if the ADAES is authorized to unsubscribe from the edge load data collection event associated with the resource URI "{apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}";

b) if the ADAES is authorized to unsubscribe from the edge load data collection event, the ADAEC shall delete the resource pointed by the resource URI "{apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId}";

c) if the request is successfully processed, the ADAEC shall respond to the ADAES with a "204 No Content" status code; and

d) if errors occur when processing the request, the ADAEC shall respond to the ADAES with an appropriate error response as specified in clause 7.1.6.

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

#### 7.1.3.5 Resource: Edge load data collection event subscription

##### 7.1.3.5.1 Description

Edge load data collection event subscription is used by the ADAES to subscribe to the ADAEC for the event of the edge load data collection.

##### 7.1.3.5.2 Resource definition

Resource URI: **{apiRoot}/adae-sc/<apiVersion>/edge-load**

This resource shall support the resource URI variables defined in the table 7.1.3.5.2-1.

Table 7.1.3.5.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data Type | Definition |
| apiRoot | string | See clause 5.2.4 in 3GPP TS 29.122 [4] |

##### 7.1.3.5.3 Resource standard methods

###### 7.1.3.5.3.1 POST

This method is the ADAES to subscribe to the ADAEC for the event of the edge-load data collection and shall support the URI query parameters specified in table 7.1.3.5.3.1-1.

Table 7.1.3.5.3.1-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| n/a |  |  |  |  |  |

This method shall support the request data structures specified in table 7.1.3.5.3.1-2 and the response data structures and response codes specified in table 7.1.3.5.3.1-3.

Table 7.1.3.5.3.1-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EdgeSubs | M | 1 | Subscription to the edge load data collection event |

Table 7.1.3.5.2.3.1-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| EdgeSubs | M | 1 | 201 Created | Subscription to the edge load data collection is created. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

Table 7.1.3.5.2.3.1-4: Headers supported by the 201 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | String | M | 1 | Contains the URI of the newly created resource, according to the structure: {apiRoot}/adae-sc/<apiVersion>/edge-load/{edgeLdId} |

##### 7.1.3.5.4 Resource custom operations

None.

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

#### 7.1.3.6 Resource: Individual edge load event subscription

##### 7.1.3.6.1 Description

The individual edge load event subscription resource represents an individual event subscription of the ADAE server.

##### 7.1.3.6.2 Resource Definition

Resource URI: **{apiRoot}/adae-sc/<apiVersion>/****edge-load/{edgeLdId}**

This resource shall support the resource URI variables defined in the table 7.1.3.6.2-1.

Table 7.1.3.6.2-1: Resource URI variables for this resource

|  |  |  |
| --- | --- | --- |
| Name | Data Type | Definition |
| apiRoot | string | See clause 5.2.4 in 3GPP TS 29.122 [4] |
| edgeLdId | string | Identifies an edge load data collection event subscription |

##### 7.1.3.6.3 Resource Standard Methods

##### 7.1.3.6.3.1 DELETE

This method shall support the URI query parameters specified in table 7.1.3.6.3.1-1.

Table 7.1.3.6.3.1-1: URI query parameters supported by the DELETE method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

This method shall support the request data structures specified in table 7.1.3.6.3.1-2 and the response data structures and response codes specified in table 7.1.3.6.3.1-3.

Table 7.1.3.6.3.1-2: Data structures supported by the DELETE Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| n/a |  |  |  |

Table 7.1.3.6.3.1-3: Data structures supported by the DELETE Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| n/a |  |  | 204 No Content | The individual edge load data collection event subscription matching the edgeLdId is deleted. |
| NOTE: The mandatory HTTP error status codes for the DELETE method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] also apply. | | | | |

##### 7.1.3.6.4 Resource Custom Operations

None.

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

##### 7.1.4.3.2 Notification definition

The POST method shall be used for the event notification and the callback URI shall be the one provided by the consumer during the subscription to the event.

Callback URI: **{notifUri}**

This method shall support the URI query parameters specified in table 7.1.4.3.2-1.

Table 7.1.4.3.2-1: URI query parameters supported by the POST method on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| n/a |  |  |  |  |

If the notification is on the edge load data collection, this method shall support the request data structures specified in table 7.1.4.3.2-2 and the response data structures and response codes specified in table 7.1.4.3.2-3.

Table 7.1.4.3.2-2: Data structures supported by the POST Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| EdgeNotif | M | 1 | Notification information of edge load data collection event |

Table 7.1.4.3.2-3: Data structures supported by the POST Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response codes | Description |
| n/a |  |  | 204 No Content | Notification for the edge load data collection event is accepted. |
| NOTE: The mandatory HTTP error status codes for the POST method listed in table 5.2.6-1 of 3GPP TS 29.122 [4] shall also apply. | | | | |

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