**3GPP TSG-CT WG3 Meeting #125 *C3-225195\_R1***

**Toulouse, France, 14th – 18th November 2022**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.2* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **29.549** | **CR** | **0121** | **rev** | **-** | **Current version:** | **17.6.0** |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network | **X** |

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|  | | | | | | | | | | |
| ***Title:*** | PATCH and PUT methods for the SS\_NetworkResourceMonitoring API | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Ericsson | | | | | | | | | |
| ***Source to TSG:*** | CT3 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | eSEAL2 | | | | |  | ***Date:*** | | | 2022-11-01 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-18 |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-16 (Release 16) Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The VAL server needs a mechanism to update an existing individual unicast QoS monitoring subscription on the NRM server side. The clause 14.4.4.6 of 3GPP TS 23.434 (CR #0112 of 3GPP TS 23.434) defines this functionality. However, the necessary procedure, HTTP metods and data structures are not defined in the current version of 3GPP TS 29.549. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | This CR intoroduces the PUT and PATCH methods for the Update\_Unicast\_QoS\_Monitoring service operation and related data structure in the SS\_NetworkResourceMonitoring API. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | * Impossiblity to replace or partially modify a unicast QoS monitoring subscription in the SS\_NetworkResourceMonitoring API. * Misaligment with the Stage 2 requirements. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 7.4.2.2.1; 7.4.2.2.3.3.3 (new); 7.4.2.2.3.3.4 (new); 7.4.2.4.1; 7.4.2.4.2.11 (new); | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **X** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | | * This CR does not affect any OpenAPI file. | | | | | | | | |
| ***()*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**Additional discussion(if needed):**

**Proposed changes:**

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

##### 7.4.2.2.1 Overview

This clause describes the structure for the Resource URIs and the resources and methods used for the service.

Figure 7.4.2.2.1-1 depicts the resource URIs structure for the SS\_NetworkResourceMonitoring API.



Figure 7.4.2.2.1-1: Resource URI structure of the SS\_NetworkResourceMonitoring API

Table 7.4.2.2.1-1 provides an overview of the resources and applicable HTTP methods.

Table 7.4.2.2.1-1: Resources and methods overview

|  |  |  |  |
| --- | --- | --- | --- |
| Resource name | Resource URI | HTTP method or custom operation | Description |
| Unicast Monitoring Subscriptions | /subscriptions | POST | Create individual unicast monitoring subscription resource or obtain unicast QoS monitoring data for VAL UEs, VAL Group, or VAL Streams. |
| Individual Unicast Monitoring Subscription | /subscriptions/{subscriptionId} | DELETE | Remove an existing individual unicast monitoring subscription resource according to the subscriptionId. |
| GET | Read an existing individual unicast monitoring subscription resource according to the subscriptionId. |
| PUT | Replace an individual unicast monitoring subscription identified by the subscriptionId. |
| PATCH | Partially modify an individual unicast monitoring subscription identified by the subscriptionId. |

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

7.4.2.2.3.3.3 PUT

This operation updates the "Individual Unicast Monitoring Subscription". This method shall support the URI query parameters specified in table 7.4.2.2.3.3.3-1.

Table 7.4.2.2.3.3.3-1: URI query parameters supported by the PUT method on this resource

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

This method shall support the request data structures specified in table 7.4.2.2.3.3.3-2 and the response data structures and response codes specified in table 7.4.2.2.3.3.3-3.

Table 7.4.2.2.3.3.3-2: Data structures supported by the PUT Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MonitoringSubscription | M | 1 | Updated details of the unicast QoS monitoring subscription.  The target identifiers, i.e., the "valUeIds", "valGroupId”, and "valStreamIds" attributes shall not be changed in the MonitoringSubscription data structure. |

Table 7.4.2.2.3.3.3-3: Data structures supported by the PUT Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| MonitoringSubscription | M | 1 | 200 OK | The subscription is updated successfully, and the updated subscription information returned in the response. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative location management server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource modification. The response shall include a Location header field containing an alternative URI of the resource located in an alternative location management server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the PUT method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.4.2.2.3.3.3-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative location management server. |

Table 7.4.2.2.3.3.3-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative location management server. |

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

7.4.2.2.3.3.4 PATCH

This operation partially modifies the "Individual Unicast Monitoring Subscription". This method shall support the URI query parameters specified in table 7.4.2.2.3.3.4-1.

Table 7.4.2.2.3.3.4-1: URI query parameters supported by the PATCH method on this resource

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

This method shall support the request data structures specified in table 7.4.2.2.3.3.4-2 and the response data structures and response codes specified in table 7.4.2.2.3.3.4-3.

Table 7.4.2.2.3.3.4-2: Data structures supported by the PATCH Request Body on this resource

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | P | Cardinality | Description |
| MonitoringSubscriptionPatch | M | 1 | Contains the modifications to be applied to the individual unicast QoS monitoring subscription resource. |

Table 7.4.2.2.3.3.4-3: Data structures supported by the PATCH Response Body on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Data type | P | Cardinality | Response  codes | Description |
| MonitoringSubscription | M | 1 | 200 OK | Individual individual unicast QoS monitoring subscription resource is modified successfully and representation of the modified individual unicast QoS monitoring subscription resource is returned. |
| n/a |  |  | 307 Temporary Redirect | Temporary redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative SEAL server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| n/a |  |  | 308 Permanent Redirect | Permanent redirection, during resource termination. The response shall include a Location header field containing an alternative URI of the resource located in an alternative SEAL server.  Redirection handling is described in clause 5.2.10 of 3GPP TS 29.122 [3]. |
| NOTE: The mandatory HTTP error status codes for the PATCH method listed in table 5.2.6-1 of 3GPP TS 29.122 [3] also apply. | | | | |

Table 7.4.2.2.3.3.4-4: Headers supported by the 307 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SEAL server. |

Table 7.4.2.2.3.3.4-5: Headers supported by the 308 Response Code on this resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description |
| Location | string | M | 1 | An alternative URI of the resource located in an alternative SEAL server. |

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

##### 7.4.2.4.1 General

This clause specifies the application data model supported by the API. Data types listed in clause 6.2 apply to this API

Table 7.4.2.4.1-1 specifies the data types defined specifically for the SS\_NetworkResourceMonitoring API service.

Table 7.4.2.4.1-1: SS\_NetworkResourceMonitoring API specific Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Section defined | Description | Applicability |
| FailureReport | 7.4.2.4.2.9 | Represents the failure report indicating the VAL UE(s) or VAL Stream ID(s) for which the NRM server failed to obtain the requested data. |  |
| FailureReason | 7.4.2.4.3.3 | Represents the failure reason. |  |
| MeasurementData | 7.4.2.4.2.3 | Presents the aggregated measurement data. |  |
| MeasurementDataType | 7.4.2.4.3.1 | Indicates the requested measurement data type. |  |
| MeasurementPeriod | 7.4.2.4.2.4 | Indicates the measurement time period. |  |
| MeasurementRequirements | 7.4.2.4.2.6 | Indicates the measurement requirements. |  |
| MonitoringReport | 7.4.2.4.2.2 | Indicates the monitoring report for VAL UEs list, VAL Group, or VAL Stream. |  |
| MonitoringSubscription | 7.4.2.4.2.7 | The monitoring subscription request. |  |
| MonitoringSubscriptionPatch | 7.4.2.4.2.11 | Represents the monitoring subscription partial modification request. | UpdateSupport |
| ReportingRequirements | 7.4.2.4.2.5 | Indicates the requested requirements of reporting. |  |
| ReportingThreshold | 7.4.2.4.2.10 | Indicates a requested reporting threshold. |  |
| TerminationMode | 7.4.2.4.3.2 | Indicates the termination mode. |  |
| ThresholdHandlingMode | 7.4.2.4.3.4 | Indicates the multi-parameter threshold handling mode. |  |

Table 7.4.2.4.1-2 specifies data types re-used by the SS\_NetworkResourceMonitoring API service.

Table 7.4.2.4.1-2: Re-used Data Types

|  |  |  |  |
| --- | --- | --- | --- |
| Data type | Reference | Comments | Applicability |
| AverWindow | 3GPP TS 29.571 [21] |  |  |
| BitRate | 3GPP TS 29.571 [21] |  |  |
| DateTime | 3GPP TS 29.571 [21] |  |  |
| DurationSec | 3GPP TS 29.571 [21] |  |  |
| MatchingDirection | 3GPP TS 29.520 [33] |  |  |
| NotificationMethod | 3GPP TS 29.508 [32] |  |  |
| PacketLossRate | 3GPP TS 29.571 [21] |  |  |
| SupportedFeatures | 3GPP TS 29.571 [21] |  |  |
| Uinteger | 3GPP TS 29.571 [21] |  |  |
| Uri | 3GPP TS 29.571 [21] |  |  |
| ValTargetUe | clause 7.3.1.4.2.3 | Used to identify either a VAL User ID or a VAL UE ID. |  |
| WebsockNotifConfig | 3GPP TS 29.122 [3] |  |  |

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

###### 7.4.2.4.2.11 Type: MonitoringSubscriptionPatch

Table 7.4.2.4.2.11-1: Definition of type MonitoringSubscriptionPatch

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name | Data type | P | Cardinality | Description | Applicability |
| measReqs | MeasurementRequirements | O | 0..1 | Indicates the measurement requirements. |  |
| reportReqs | ReportingRequirements | O | 0..1 | Indicates the reporting requirements. |  |
| notifUri | Uri | O | 0..1 | Indicates the URI where the notification should be delivered to. |  |

\* \* \* End of changes \* \* \* \*