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| CHANGE REQUEST | |
| Meeting ID:\* | SDS #57 |
| Source:\* | Siddharth Trikha, C-DOT, [strikha@cdot.in](mailto:strikha@cdot.in)  Poornima Shandilya, C-DOT, [poornima@cdot.in](mailto:poornima@cdot.in)  Jagan Singh Choudhari, C-DOT [jagan@cdot.in](mailto:jagan@cdot.in) |
| Date:\* | 2022-11-29 |
| Reason for Change/s:\* | See the introduction |
| CR against: Release\* | Release 4 |
| CR against: WI\* | Active WI-xxxx  MNT maintenance / < Work Item number(optional)>  Is this a mirror CR? Yes  No  mirror CR number: (Note to Rapporteur - use latest agreed revision)  STE Small Technical Enhancements / < Work Item number (optional)>  Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0004 4\_11\_0 |
| Clauses \* | 6.3.4.2.60, 7.4.57.2 |
| Type of change: \* | Editorial change  Bug Fix or Correction  Change to existing feature or functionality  New feature or functionality  Only ONE of the above shall be ticked |
| Impacted other TS/TR(s) |  |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES  NO  This CR may break backwards compatibility with the last approved version of the TS? YES  NO |
| Template Version: January 2017 (Do not modify) | |

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GUIDELINES for Change Requests:

Provide an informative introduction containing the problem(s) being solved, and a summary list of proposals.

Each CR should contain changes related to only one particular issue/problem.

In case of a correction, and the change apply to previous releases, a separate “mirror CR” should be posted at the same time of this CR

Mirror CR: applies only when the text, including clause numbering are exactly the same.

Companion CR: applies when the change means the same but the baselines differ in some way (e.g. clause number).

Follow the principle of completeness, where all changes related to the issue or problem within a deliverable are simultaneously proposed to be made E.g. A change impacting 5 tables should not only include a proposal to change only 3 tables. Includes any changes to references, definitions, and acronyms in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar to the extent practicable.

Use Change bars for modifications.

The change should include the current and surrounding clauses to clearly show where a change is located and to provide technical context of the proposed change. Additions of complete clauses need not show surrounding clauses as long as the proposed clause number clearly shows where the new clause is proposed to be located.

Multiple changes in a single CR shall be clearly separated by horizontal lines with embedded text such as, start of change 1, end of change 1, start of new clause, end of new clause.

When subsequent changes are made to content of a CR, then the accepted version should not show changes over changes. The accepted version of the CR should only show changes relative to the baseline approved text.

Introduction

This CR proposes to align the *triggerStatus* attribute values as per the mappings in TS-0001, TS-0026.

TRIGGER-SUBMITTED to be replaced by TRIGGERED-TRIGGERED.

As per TS-0026 the deliveryResult values:

Table 5.7.2.2.3-1: Enumeration DeliveryResult

|  |  |  |
| --- | --- | --- |
| Enumeration value | Description | Applicability (NOTE) |
| SUCCESS | The SCEF includes this value in a device triggering notification.  The value indicates that the device action request was successfully completed. |  |
| UNKNOWN | The SCEF includes this value in a device triggering notification.  The value indicates any unspecified errors. |  |
| FAILURE | The SCEF includes this value in a device triggering notification.  The value indicates that this trigger encountered a delivery error and is deemed permanently undeliverable. |  |
| TRIGGERED | The SCEF includes this value in the response for a successful device triggering request.  The value indicates that device triggering request is accepted by the SCEF. |  |
| EXPIRED | The SCEF includes this value in a device triggering notification.  The value indicates that the validity period expired before the trigger could be delivered. |  |
| UNCONFIRMED | The SCEF includes this value in a device triggering notification.  The value indicates that the delivery of the device action request is not confirmed. |  |
| REPLACED | The SCEF includes this value in the response for a successful device triggering replacement request.  The value indicates that the device triggering replacement request is accepted by the SCEF. |  |
| TERMINATE | The SCEF includes this value in the response for a successful device triggering cancellation request.  The value indicates that the delivery of the device action request is terminated by the SCS/AS. |  |
| NOTE: Properties marked with a feature as defined in clause 5.7.4 are applicable as described in clause 5.2.7. If no features are indicated, the related property applies for all the features. | | |

As per TS-0001:

|  |  |  |  |
| --- | --- | --- | --- |
| *triggerStatus* | 1 | RO | The status of the trigger request.  The Hosting CSE shall control the value of this attribute.  The following values are valid values.   * PROCESSING * ERROR-NSE-NOT-FOUND * TRIGGER-TRIGGERED * TRIGGER-DELIVERED * TRIGGER-FAILED * TRIGGER-REPLACED * TRIGGER-EXPIRED * TRIGGER-UNCONFIRMED * TRIGGER-TERMINATED * TRIGGER-SUCCESS |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

##### 6.3.4.2.60 m2m:triggerStatus

Used for the *triggerStatus* attribute of the <triggerRequest> resource.

Table 6.3.4.2.60‑1: Interpretation of m2m:triggerStatus

|  |  |  |
| --- | --- | --- |
| Value | Interpretation | Note |
| 1 | PROCESSING |  |
| 2 | ERROR\_NSE\_NOT\_FOUND |  |
| 3 | TRIGGER\_TRIGGERED |  |
| 4 | TRIGGER\_DELIVERED |  |
| 5 | TRIGGER\_EXPIRED |  |
| 6 | TRIGGER\_FAILED |  |
| 7 | TRIGGER\_REPLACED |  | |
| 8 | TRIGGER\_UNCONFIRMED |  | |
| 9 | TRIGGER\_TERMINATED |  | |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 7.4.57.2 <triggerRequest> resource specific procedures for CRUD operations

##### 7.4.57.2.0 Introduction

This clause describes <triggerRequest> resource specific primitive behaviour for CRUD operations.

##### 7.4.57.2.1 Create

***Originator:***

The Originator shall use the steps Orig-1.0, Orig-2.0, and Orig-3.0 as described in clause 7.2.2.1.

***Receiver:***

The Receiver shall use the steps Recv-1.0 to Recv-10.0 as described in clause 7.2.2.2.

While processing the <triggerRequest> Create primitive, the Receiver shall detect the following types of errors and send a corresponding status code to the Originator.

* If the Originator specifies a *Trigger-Recipient-ID* value in the Create primitive for a Registree AE or CSE, and the *triggerEnable* attribute of the Registree's <AE> or <remoteCSE> resource has a value of false, the Receiver shall generate a ***Response Status Code*** indicating "TRIGGERING\_DISABLED\_FOR\_RECIPIENT".

While processing the <triggerRequest> Create primitive the Receiver shall determine which NSE to forward the trigger request to based on locally provisioned information or based on a DNS lookup of the M2M-Ext-ID attribute of the <triggerRequest>. If an NSE cannot be determined, the Receiver shall set the *triggerStatus* attribute to ERROR\_NSE\_NOT\_FOUND. Otherwise, the Receiver shall continue to process the trigger request and set the *triggerStatus* attribute to PROCESSING.

To continue processing the request, the Receiver shall submit a trigger request to the NSE via the Mcn triggering procedure as defined in clause 9. The message shall contain information needed by the NSE to generate a trigger request for the corresponding underlying network. For a 3GPP trigger request, the required information within the trigger request message is captured in clause 7.5.1 of oneM2M TS-0026 [43].

Upon receipt of trigger response(s) from the NSE, the Receiver shall set the *triggerStatus* attribute of the <triggerRequest> resource:

* If the Receiver receives a confirmation from the NSE that the trigger was accepted, the Receiver shall set the *triggerStatus* attribute to TRIGGER\_TRIGGERED.
* If the Receiver receives an indication that the trigger request was successfully delivered, the Receiver shall set the *triggerStatus* attribute to TRIGGER\_DELIVERED.
* If the Receiver receives an indication that the trigger request was not accepted or the delivery was not successful, the Receiver shall set the *triggerStatus* attribute to TRIGGER\_FAILED.
* If the Receiver receives an indication that the trigger request expired before completion the Receiver shall set the *triggerStatus* attribute to TRIGGER\_EXPIRED.
* If the Receiver receives an indication that the trigger request is terminated before completion the Receiver shall set the *triggerStatus* attribute to TRIGGER\_TERMINATED.
* If the Receiver receives an indication that the delivery of trigger request is not confirmed the Receiver shall set the *triggerStatus* attribute to TRIGGER\_UNCONFIRMED.

##### 7.4.57.2.2 Retrieve

***Originator:***

No change from the generic procedures in clause 7.2.2.1.

***Receiver:***

No change from the generic procedures in clause 7.2.2.2.

##### 7.4.57.2.3 Update

The following procedure replaces an outstanding trigger request that is still being processed by an underlying network with an updated trigger request.

***Originator:***

The Originator shall use the steps Orig-1.0, Orig-2.0, and Orig-3.0 as described in clause 7.2.2.1.

***Receiver:***

The Receiver shall use the steps Recv-1.0 to Recv-10.0 as described in clause 7.2.2.2.

The Originator shall provide the <triggerRequest> resource representation to the Receiver IN-CSE. While processing the <triggerRequest> Update primitive, the Receiver shall detect the following types of errors and send a corresponding status code to the Originator.

* If the value of *triggerStatus* of the existing <triggerRequest> is PROCESSING, the Receiver shall continue to process the Update request. Otherwise, the Receiver shall generate a ***Response Status Code*** indicating "UNABLE\_TO\_REPLACE\_REQUEST".
* If the Originator specifies a *Trigger-Recipient-ID* value in the Update primitive for a Registree AE or CSE, and the *triggerEnable* attribute of the Registree's <AE> or <remoteCSE> resource has a value of false, the Receiver shall generate a ***Response Status Code*** indicating "TRIGGERING\_DISABLED\_FOR\_RECIPIENT".

While processing the <triggerRequest> Update primitive, the Receiver shall forward the trigger replace request to the same NSE that the trigger request was forwarded to when the <triggerRequest> was created. If the NSE cannot be reached, the Receiver shall set the *triggerStatus* attribute to ERROR\_NSE\_NOT\_FOUND.

To continue processing the request, the Receiver shall submit the trigger request to the NSE via the Mcn triggering procedure defined in clause 9. The message shall contain information needed by the NSE to replace the trigger request for the corresponding underlying network. For a 3GPP trigger replace request, the required information within the trigger request message is captured in clause 7.5.2 of oneM2M TS-0026 [43].

Upon receipt of a successful trigger replace response from the NSE, the Receiver shall set the *triggerStatus* attribute of the <*triggerRequest*> resource to TRIGGER\_REPLACED and generate a ***Response Status Code*** indicating "UPDATED". Otherwise, the Receiver shall generate a ***Response Status Code*** indicating "UNABLE\_TO\_REPLACE\_REQUEST".

##### 7.4.57.2.4 Delete

***Originator:***

The Originator shall issue a request to the Receiver IN-CSE to delete the <triggerRequest> resource. The Originator shall use the steps Orig-1.0, Orig-2.0, and Orig-3.0 as described in clause 7.2.2.1.

***Receiver:***

The Receiver shall use the steps Recv-1.0 to Recv-10.0 as described in clause 7.2.2.2.

While processing the <triggerRequest> Delete primitive, the Receiver shall detect the following types of errors and send a corresponding status code to the Originator:

* If the value of *triggerStatus* of the existing <triggerRequest> is PROCESSING, the Receiver shall continue to process the Delete request. Otherwise, the Receiver shall generate a ***Response Status Code*** indicating "UNABLE\_TO\_RECALL\_REQUEST".

While processing the <triggerRequest> Delete primitive, the Receiver shall send a request to the same NSE that the trigger request was sent to when the <triggerRequest> was created. If the NSE cannot be reached, the Receiver shall set the *triggerStatus* attribute to ERROR\_NSE\_NOT\_FOUND.

To continue processing the request, the Receiver shall submit the trigger recall request to the NSE via the Mcn triggering procedure defined in clause 9. The message shall contain information needed by the NSE to recall the trigger request for the corresponding underlying network. For a 3GPP trigger recall request, the required information within the trigger recall request message is captured in clause 7.5.2 of oneM2M TS-0026 [43].

Upon receipt of a successful trigger recall response from the NSE, the Receiver shall delete the <triggerRequest> resource and generate a ***Response Status Code*** indicating "DELETED". Otherwise, the Receiver shall not delete the <triggerRequest> resource and instead generate a ***Response Status Code*** indicating "UNABLE\_TO\_RECALL\_REQUEST".

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*