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| CHANGE REQUEST |
| Meeting ID:\* | SDS 61 |
| Source:\* | Taehyun Kim (SyncTechno), Sherzod Elamanov (SyncTechno) |
| Date:\* | 2023-08-14 |
| Reason for Change/s:\* | Clarify the usage of different types of formats of notificationURI entries of <subscription> resource |
| CR against: Release\* | Release 4 |
| CR against: WI\* | [x]  Active WI-113 [ ]  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 V4.16.0 |
| Clauses \* | 7.4.8.2.1, 7.5.1.2.2, 7.3.1.3 |
| Type of change: \* | [ ]  Editorial change[x]  Bug Fix or Correction[ ]  Change to existing feature or functionality[ ]  New feature or functionalityOnly ONE of the above shall be ticked |
| Other TS/TR(s) impacted | <TS/TR number>, <Version Number>, and <Description on which aspect should be reflected in this TS/TR> |
| Post Freeze checking:\* | This CR contains only essential changes and corrections? YES [x]  NO [ ] This CR may break backwards compatibility with the last approved version of the TS? YES [ ]  NO [x]  |
| Template Version: January 2020 (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.

If this is a correction, and the change applies to previous releases, a separate “mirror CR” should be posted at the same time as 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. Include any changes to references, definitions, and abbreviations in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar.

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 proposed new clause is 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 the 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

TS-0004 implementation of TS-0001 CR SDS-0134r02 for clarifying the behaviour for two different types of format (oneM2M compliant Resource-ID and URL format) of *notificationURI* entries in <subscription> resource

Changes:

* Change 1: add restrictions for “Blocking\_update” and subscription verification request in <subscription> Create procedure
* Change 2: for “Notification for <subscription> resources” procedure, clarify that the Originator shall not wait for a Response Primitive
* Change 3: clarify the same as in Change 2 in “7.3.1.3 Wait for response primitive” clause (referenced in clause 7.2.2.1).

R01:

* Change 1: changes to some sentences
* Change 2: move the sentence “Originator shall not wait for response primitive…” to Step 8.0. Add a note to clarify the case when a receiver responds in some protocols.
* Change 3: rephrase the added sentence to avoid duplication in Change 2 and Change 3.

### ----------------------Start of change 1-------------------------------------------

7.4.8.2.1 Create

***Originator:***

No change from the generic procedures in clause 7.2.2.1.

If the Originator specifies a *missingData* condition with a duration value greater than the *periodicInterval* attribute of the <timeSeries> resource no notification on missing data points will be generated.

***Receiver:***

The following are additional Hosting CSE procedures to the generic resource handling procedures (Figure 7.2.2.2‑1 in clause 7.2.2.2). The additional procedures shall be inserted from Recv-6.2 to Recv-6.5 as below.

Recv-6.3 The following step is in addition to the procedures defined in clause 7.3.3.15:

Check if the Originator has privileges for retrieving the subscribed-to resource. If the Originator does not have the privilege, the Hosting CSE shall return the response primitive with a ***Response Status Code*** indicating an "ORIGINATOR\_HAS\_NO\_PRIVILEGE" error.

Recv-6.4 The following steps are in addition to the procedures defined in clause 7.3.3.3:

1. Check if the subscribed-to resource, addressed in the ***To*** parameter in the Request, is subscribable. Subscribable resource types are defined in TS-0001 [6]; they have <subscription> resource types as their child resources. If it is not subscribable, the Hosting CSE shall return the Notify response primitive with a ***Response Status Code*** indicating a "TARGET\_NOT\_SUBSCRIBABLE" error instead of the ***Response Status Code*** "INVALID\_CHILD\_RESOURCE\_TYPE".
2. Check if the *notificationEventType* is set to "Blocking\_Update".

If the subscribed-to resource already has a subscription with this *notificationEventType* the Hosting CSE shall return the response primitive with an ***Response Status Code*** indicating a "BLOCKING\_SUBSCRIPTION\_ALREADY\_EXISTS" error if more than one notification of this type could be sent.

If more than one Notification Target is specified in *notificationURI* , the Hosting CSE shall return the response primitive with a ***Response Status Code*** indicating a "BAD\_REQUEST" error.

If any resource-specific attributes of the <subscription> resource other than *eventNotificationCriteria* or *notificationURI* are specified the Hosting CSE shall return the primitive with a ***Response Status Code*** indicating a "BAD\_REQUEST" error.

If any condition tag of the *eventNotificationCriteria* attribute other than *attribute* condition tag is specified, the Hosting CSE shall return the response primitive with a ***Response Status Code*** indicating a "BAD\_REQUEST" error.

If the Notification Target is not a oneM2M compliant Resource-ID, the Hosting CSE shall return the response primitive with a ***Response Status Code*** indicating a "BAD\_REQUEST" error.

1. Check if the *notificationEventType* is set to “Report on missing data points”. If the *missingData* attribute is not provided as well, the request shall be rejected with a ***Response Status Code*** indicating a "BAD\_REQUEST" error***.***
2. Check if the *missingData* element of eventNotificationCriteria is provided.

If the subscribed-to resource (i.e. the resource given by the ***To*** parameter in the Request) is not a <timeSeries>, the request shall be rejected with a ***Response Status Code*** indicating a "BAD\_REQUEST" error.

1. If any of the *notificationURI* entries are not the Originator and are formatted as oneM2M compliant Resource-ID, the Hosting CSE may send a Subscription Verification request primitive to each of them as described in clause 7.5.1.2.3.

a) If the Hosting CSE cannot send one or more Subscription Verification request primitives, the Hosting CSE shall return the Create <subscription> response primitive with a ***Response Status Code*** indicating a "SUBSCRIPTION\_VERIFICATION\_INITIATION\_FAILED" error.

b) If the Hosting CSE sent all the Subscription Verification request primitives, the Hosting CSE shall check if each Notify response primitive contains a ***Response Status Code*** indicating "OK". If not, the Hosting CSE shall return the Create <subscription> response primitive containing the ***Response Status Code*** indicating a "SUBSCRIPTION\_VERIFICATION\_INITIATION\_FAILED" error.

1. If the Originator provides a value of *childResourceType* which is not a valid child of the subscribed-to resource, the request shall be rejected with a ***Response Status Code*** indicating a “BAD\_REQUEST” error***.***
2. If the Originator provides *missingData*, check that subscribed-to resource is of type <timeSeries>. If not, the request shall be rejected with a ***Response Status Code*** indicating a "BAD\_REQUEST" error*.*
3. If both the *notificationEventType* and *operationMonitor* are present in the *eventNotificationCriteria* in the Request, the request shall be rejected with a ***Response Status Code*** indicating a "BAD\_REQUEST" error***.***
4. If the *notificationContentType* is invalid for a given operation (refer to oneM2M TS-0001 [6] Table 9.6.8-4: Default and allowed values of *notificationContentType*) the request shall be rejected with a ***Response Status Code*** indicating a "BAD\_REQUEST" error***.***

Recv-6.5: The following steps are in addition to the procedures defined in clause 7.3.3.5:

1. If the Originator does not provide *notificationContentType*, the Hosting CSE shall set it according to the default shown in oneM2M TS-0001 [6] Table 9.6.8-4: Default and allowed values of *notificationContentType.*
2. If the *notificationURI* is not the Originator, the Hosting CSE shall set the Originator’s ID as the <subscription> resource's *creator* attribute.
3. If the *batchNotify* attribute is present in the Request but *batchNotify*/*duration* is not provided by the Originator, the Hosting CSE shall set the value of *batchNotify*/*duration* to the default duration as given by the M2M Service Provider.
4. If the *notificationStatsEnable* attribute is set to true, the Hosting CSE shall start recording notification statistics in the *notificationStatsInfo* attribute once the <subscription> resource is created. The *notificationStatsInfo* attribute shall not be added until a first notification statistics entry is added to this attribute.
5. If the *notificationStatsEnable* attribute is set to false, the Hosting CSE shall not start recording notification statistics and the *notificationStatsInfo* attribute shall not be added.

### ----------------------End of change 1-------------------------------------------

### ----------------------Start of change 2-------------------------------------------

#### 7.3.1.3 Wait for response primitive

The originator shall wait for the Response primitive from the receiver that corresponds to the Request primitive that was sent by the originator. Correlation between the Request and the corresponding Response is handled by the transport layer or by Request Identifier parameter of the primitive.

If no Response primitive is received within a certain time, specified by server policy and/or by the underlying transport technology, this shall be handled as if a Response primitive with a ***Response Status Code*** indicating "REQUEST\_TIMEOUT" error was received.

The originator shall not wait for the Response primitive from the receiver after sending a Notification request to a non-oneM2M entity.

NOTE: For some protocol bindings (e.g. HTTP), the Originator may receive a transport-protocol specific response to a Notification that was sent to a non-oneM2M entity. The handling of such a response is out of scope of the present document.

### ----------------------End of change 2-------------------------------------------

CHECK LIST

* Does this Change Request include an informative introduction containing the problem(s) being solved, and a summary list of proposals.?
* Does this CR contain changes related to only one particular issue/problem?
* Have any mirror CRs been posted?
* Does this Change Request make **all** the changes necessary to address the issue or problem? E.g. A change impacting 5 tables should not include a proposal to change only 3 tables?Does this Change Request follow the drafting rules?
* Are all pictures editable?
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* Are multiple changes in this CR 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.?