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| CHANGE REQUEST |
| Meeting ID:\* | SDS 42 |
| Source:\* | Neeta Meshram (neeta@cdot.in), Suman Sheoran(ssheoran@cdot.in) , Anupama Chopra(anupama@cdot.in) C-DOT |
| Date:\* | 2019-09-23 |
| Reason for Change/s:\* |  See the Introduction |
| CR against: Release | Release-3 |
| CR against: WI\* | [ ]  Active <Work Item number> [ ]  MNT maintenance / < Work Item number(optional)>Is this a mirror CR? Yes [ ]  No [ ] mirror CR number: (Note to Rapporteur - use latest agreed revision)[x]  STE Small Technical Enhancements / < Work Item number (optional)>Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0004-Service\_Layer\_Core\_Protocol-V3\_13 |
| Clauses \* | 7.2.1.1 |
| 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 |  |
| 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 2019 (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

As per TS-0001, section 9.5.0 Write once is defined as

Write Once (WO): the value of the attribute is set when the resource is Created based on information from the Originator (i.e. ***Content*** parameter). Such an attribute is allowed for Retrieve operation after the creation.

Such attribute can thereafter only be updated by hosting CSE internally.

It is clearly mentioned that WO attribute shall be updated by only Hosting CSE internally that means WO attribute shall never be updated by sending request from originator. So, there is no point allowing such attributes for Update operation. These attributes shall be rejected during the validation of attributes provided by originator in update request.

Similarly, Read Only is defined as

Read Only (RO): the value of the attribute is set or can be updated by the Hosting CSE internally. Such an attribute is allowed for Retrieve operation only.

RO attributes shall never come in the request either in case Create and Update request.

Attribute *periodicInterval* of <timeSeries> is one such example:

Table 9.6.36-2: Attributes of <*timeSeries*> resource

| Attributes of *<timeSeries>* | Multiplicity | RW/RO/WO | Description | *<timeSeriesAnnc>* Attributes |
| --- | --- | --- | --- | --- |
| *resourceType* | 1 | RO | See clause 9.6.1.3. | NA |
| *resourceID* | 1 | RO | See clause 9.6.1.3. | NA |
| *resourceName* | 1 | WO | See clause 9.6.1.3. | NA |
| *parentID* | 1 | RO | See clause 9.6.1.3. | NA |
| *expirationTime* | 1 | RW | See clause 9.6.1.3  | MA |
| *accessControlPolicyIDs* | 0..1 (L) | RW | See clause 9.6.1.3.  | MA |
| *labels* | 0..1 (L) | RW | See clause 9.6.1.3. | MA |
| *creationTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *lastModifiedTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *announceTo* | 0..1 (L) | RW | See clause 9.6.1.3. | NA |
| *announcedAttribute* | 0..1 (L) | RW | See clause 9.6.1.3. | NA |
| *dynamicAuthorizationConsultationIDs* | 0..1 (L) | RW | See clause 9.6.1.3. | OA |
| *creator* | 0..1 | RO |  See clause 9.6.1.3. | NA |
| *maxNrOfInstances* | 0..1 | RW | Maximum number of direct child *<timeSeriesInstance>* resources in the <*timeSeries*> resource. | OA |
| *maxByteSize* | 0..1 | RW | Maximum size in bytes of data that is allocated for the *<timeSeries>* resource for all direct child*<timeSeriesInstance>* resources. | OA |
| *maxInstanceAge* | 0..1 | RW | Maximum age of a direct child *<timeSeriesInstance>* resource in the <*timeSeries*> *resource*. The value is expressed in seconds. | OA |
| *currentNrOfInstances* | 1 | RO |  Current number of direct child *<timeSeriesInstance>* resource in the <*timeSeries*> resource. It is limited by the *maxNrOfInstances*. The *currentNrOfInstances* attribute of the <timeSeries> resource shall be updated on successful creation or deletion of direct child < *timeSeriesInstance* > resource of <timeSeries > resource. | OA |
| *currentByteSize* | 1 | RO | Current size in bytes of data stored in all direct child *<timeSeriesInstance>* resources of a <*timeSeries*> resource. It is limited by the *maxByteSize*. The *currentByteSize* attribute of the <timeSeries> resource shall be updated on successful creation or deletion of direct child < *timeSeriesInstance* > resource of <timeSeries > resource. | OA |
| *periodicInterval* | 0..1 | WO | If the Time Series Data is periodic, this attribute shall contain the expected amount of time between two instances of Time Series Data. | OA |
| *periodicIntervalDelta* | 0..1 | WO | If the Time Series Data is periodic, this attribute contains a +/- delta value relative to *periodicInterval* for the purpose of detecting missing data.The value of this attribute shall be less than or equal to (*periodicInterval/2*).If the attribute is omitted the hosting CSE can use a local policy to determine a default value. | OA |
| *missingDataDetect* | 0..1 | WO | Indicates whether the Receiver shall detect the missing Time Series Data if it is periodic. | NA |
| *ontologyRef* | 0..1 | RW | A reference (URI) of the ontology used to represent the information that is stored in the child *<timeSeriesInstance>* resources of the present *<timeSeriesData>* resource (see note). | OA |
| *missingDataMaxNr* | 0..1 | RW | Maximum number of entries in the *missingDataList* if the *periodicInterval* is set and the *missingDataDetect* is TRUE. | OA |
| *missingDataList* | 0..1(L) | RO | The list of the *dataGenerationTime* valuerepresenting the missing Time Series Data in descending order by time if the *periodicInterva*l is set and the *missingDataDetect* is TRUE. | OA |
| *missingDataCurrentNr* | 0..1 | RO | Current number of the missing Time Series Data in the *missingDataList*. | OA |
| *missingDataDetectTimer* | 0..1 | RW | The *missingDataDetectTimer* is a duration after which a <*timeSeriesInstance*> shall be considered missing by the hosting CSE. If *periodicIntervalDelta* is present, the value of this attribute shall be greater than *periodicIntervalDelta.* | OA |
| *contentInfo* | 0..1 | WO | This attribute contains information to understand the contents of the *content* attribute of <timeSeriesInstance>. It shall be composed of two mandatory components consisting of an Internet Media Type (as defined in the IETF RFC 6838 [i.Error: Reference source not found]) and an encoding type. In addition, an optional content security component may also be included. The format of this attribute is defined in oneM2M TS‑0004 [Error: Reference source not found].This attribute should be used to represent the content information of the *content* attribute of child <*timeSeriesInstance*> resources so that AEs can understand the content. | OA |
| NOTE: The access to this URI is out of scope of oneM2M. |

1. Table 7.4.38.1‑1: Resource Specific Attributes of <timeSeries> resource

|  |  |  |  |
| --- | --- | --- | --- |
| Attribute Name | Request Optionality  | Data Type | Default Value and Constraints |
| Create | Update |  |  |
| *maxNrOfInstances* | O | O | xs:nonNegativeInteger | No default |
| *maxByteSize* | O | O | xs:nonNegativeInteger | No default |
| *maxInstanceAge* | O | O | xs:nonNegativeInteger | No default |
| *currentNrOfInstances* | NP | NP | xs:nonNegativeInteger | No default(This is generated by the Hosting CSE and limited by the *maxNrOfInstances*) |
| *currentByteSize* | NP | NP | xs:nonNegativeInteger | No default(This is generated by the Hosting CSE and limited by the *maxByteSize*) |
| *periodicInterval* | O | O | xs:positiveInteger  | No default (This is in units of milliseconds) |
| *missingDataDetect* | O | NP | xs:boolean | No default |
| *missingDataMaxNr* | O | O | xs:positiveInteger | No default |
| *missingDataList* | NP | NP | m2m:missingDataList | No default |
| *missingDataCurrentNr* | NP | NP | xs:nonNegativeInteger | No default(This is generated by the Hosting CSE and limited by the *missingDataMaxNr*) |
| *missingDataDetectTimer* | O | O | xs:positiveInteger  | No default(This is in units of milliseconds) |
| *ontologyRef* | O | O | xs:anyURI | No default |
| *contentInfo* | O | NP | m2m:contentInfo | No default |

This CR proposes to specify optionality of Create and Update request with reference to attribute being RO, WO or RW.

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

####  7.2.1.1 Request primitive format

Table 7.2.1.1‑1 summarizes the primitive parameters of the Request primitive, indicating their presence depending on the C, R, U, D or N operations. "M" indicates mandatory, "O" indicates optional, "NP" indicates not present.

Refer to clause 8.1.2 of the oneM2M TS-0001 [6] for additional information on the request primitive parameters.

Table 7.2.1.1‑1: Request Primitive Parameters

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Primitive Parameter** | **CREATE** | **RETRIEVE** | **UPDATE** | **DELETE** | **NOTIFY** |
| Operation | M | M | M | M | M |
| To | M | M | M | M | M |
| From | OSee note | M | M | M | M |
| Request Identifier | M | M | M | M | M |
| Resource Type | M | NP | NP | NP | NP |
| Content | M | O | M | NP | M |
| Role IDs | O | O | O | O | O |
| Originating Timestamp | O | O | O | O | O |
| Request Expiration Timestamp | O | O | O | O | O |
| Result Expiration Time | O | O | O | O | O |
| Operation Execution Time | O | O | O | O | O |
| Response Type | O | O | O | O | O |
| Result Persistence | O | O | O | O | NP |
| Result Content | O | O | O | O | NP |
| Event Category | O | O | O | O | O |
| Delivery Aggregation | O | O | O | O | O |
| Group Request Identifier | O | O | O | O | O |
| Filter Criteria | NP | O | O | O | NP |
| Discovery Result Type | NP | O | NP | NP | NP |
| Tokens | O | O | O | O | O |
| Token IDs | O | O | O | O | O |
| Local Token IDs | O | O | O | O | O |
| Token Request Indicator | O | O | O | O | O |
| Group Request Target Members | O | O | O | O | NP |
| Authorization Signature Indicator | O | O | O | O | NP |
| Authorization Signature | O | O | O | O | NP |
| Authorization Relationship Indicator | O | O | O | O | NP |
| Semantic Query Indicator | NP | O | NP | NP | NP |
| Release Version Indicator | M | M | M | M | M |
| Vendor Information | O | O | O | O | O |
| NOTE: The *From* parameter is Mandatory for all requests except for AE CREATE. For AE CREATE, it is Optional. |

The ***Content*** parameter in a Request shall contain one of the following:

1. A partial Resource. This applies to Create and Update request primitives. In the case of Create request the ***Content*** parameter shall contain a single root element whose name is the name of the Resource and whose content consists of one or more attributes, child Resources or childResource references. In the case of an Update request primitive, the ***Content*** parameter shall contain the attribute and new values. Attributes to be deleted from the resource shall be indicated without a value. In both cases the resource type is as defined in clause 7.4, however since a partial resource is being transferred it is not required to be valid according to the XSD for that resource in terms of the presence of resource attributes. Any attribute that is present, however, shall comply to the data type defined in the XSD of that resource.
	1. In the ***Content*** parameter optionality of attribute in the request shall be such that it is consistent with the following table
2. **Table 7.2.1.1‑2: Request Optionality of Attributes in Content**

|  |  |  |
| --- | --- | --- |
| 1. **Attribute (RO/WO/RW)**
 | 1. **Create**
 | 1. **Update**
 |
| 1. RW
 | 1. M/O
 | 1. O
 |
| 1. RO
 | 1. NP
 | 1. NP
 |
| 1. WO
 | 1. M/O
 | 1. NP
 |

1.
2. A Notification Data Object. This applies to Notification request primitives. The data type of the data object is named <m2m:notification> and is described in clause 7.5.1.
3. An Aggregated Notification. This applies to Notification request primitives. The data type of the data object is named <m2m:aggregatedNotification> and contains multiple <m2m:notification> objects. This is described in clause 7.5.1.
4. An AttributeList element, as described in clause 7.5.2. This is used in partial retrieve request primitives to indicate a list of attribute names whose values shall be retrieved in the response.
5. A ResponsePrimitive object as described in clause 7.5.1. This applies to Notification request primitives which are sent when accessing resources in asynchronous non-blocking mode.

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

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?
* Have you checked the spelling and grammar?
* Have you used change bars for all modifications?
* Does the change 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.)
* 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.?