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| CHANGE REQUEST | |
| Meeting ID:\* | ARC 31 |
| Source:\* | Neeta Meshram, C-DOT, [neeta@cdot.in](mailto:neeta@cdot.in)  Suman Sheoran, C-DOT, [ssheoran@cdot.in](mailto:ssheoran@cdot.in)  Poornima Shandilya, C-DOT, [poornima@cdot.in](mailto:poornima@cdot.in) |
| Date:\* | 2017-08-02 |
| 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)  STE Small Technical Enhancements / < Work Item number (optional)>  Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0001 V3\_5\_0 |
| Clauses \* | Section 9.6.37 |
| 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) | <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  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

According to TS-0001 section 10.2.4.25(Highlighted Below), Whenever a new <timeSeriesInstance> resource is created, Hosting CSE need to check that it is not voilating any of the policies(maxInstanceAge, maxByteSize and maxNrOfInstances) defined by its parent resource <timeSeries>. For checking voilation of the maxByteSize policy we will need size of the *content* attribute of <timeSeriesInstance> resource. So, it would be convenient to have an attribute which keeps size of *content* attribute.

This CR proposes to add an attribute *contentSize* in <timeSeriesInstance> resource.

This attribute is also present in <contentInstance> resource.

| *<timeSereisInstance>* CREATE | |
| --- | --- |
| Associated Reference Point | Mca, Mcc and Mcc'. |
| Information in Request message | All parameters defined in table 8.1.2-2 apply with the specific details for:  ***Content:*** The resource content shall provide the information as defined in clause 9.6.37. |
| Processing at Originator before sending Request | According to clause 10.1.2. |
| Processing at Receiver | According to clause 10.1.2.  If the newly created *<timeSeriesInstance>*  resource violates any of the policies defined in the parent *<timeSeries>* resource (i.e. *maxInstanceAge,maxNrOfInstances* or *maxByteSize*), then the *<timeSeriesInstance>*  resource with the oldest *dataGenerationTime* attribute shall be removed to enable the creation of the new *<timeSeriesInstance>* resource.  The Create Request of the other entities except the *creator*, shall be rejected. |
| Information in Response message | All parameters defined in table 8.1.3-1 apply with the specific details for:  ***Content:*** Address of the created *<timeSeriesInstance>* resource, according to clause 10.1.2. |
| Processing at Originator after receiving Response | According to clause 10.1.2. |
| Exceptions | According to clause 10.1.2. |

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

### 9.6.37 Resource Type *timeSeriesInstance*

The *<timeSeriesInstance>* resource represents a data instance in the *<timeSeries>* resource. The *<timeSeriesInstance>* resource shall not be modified once created. An AE shall be able to delete a *<timeSeriesInstance>* resource explicitly or it may be deleted by the platform based on policies. If the platform has policies for *<timeSeriesInstance>* retention, these shall be represented by the attributes *maxByteSize*, *maxNrOfInstances* and/or *maxInstanceAge* attributes in the *<timeSeries>* resource. If multiple policies are in effect, the strictest policy shall apply. The *<timeSeriesInstance>* resource inherits the same access control policies of the parent *<timeSeries>* resource, and does not have its own *accessControlPolicyIDs* attribute.

<timeSeriesInstance>

1

content

0..1

sequenceNr

1

dataGenerationTime

contentSize

1

1

Figure 9.6.37-1: Structure of <*timeSeriesInstance*> resource

The < *timeSeriesInstance*> resource shall contain the attributes specified in table 9.6.37-1.

Table 9.6.37-1: Attributes of <*timeSeriesInstance*> resource

| Attributes of *<timeSeriesInstance>* | Multiplicity | RW/  RO/  WO | Description | *<timeSeriesInstanceAnnc>* 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 |
| *labels* | 0..1 (L) | WO | See clause 9.6.1.3. | MA |
| *creationTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *expirationTime* | 1 | WO | 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 |
| *lastModifiedTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *dataGenerationTime* | 1 | WO | This attribute contains the time when the data was generated by the AE/CSE. | OA |
| *content* | 1 | WO | This attribute contains the data generated by the AE/CSE. | OA |
| *sequenceNr* | 0..1 | WO | This attribute contains the data sequence number generated by the AE/CSE | OA |
| contentSize | 1 | RO | Size in bytes of the content attribute | OA |

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

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

### 9.6.36 Resource Type *timeSeries*

The *<timeSeries>* resource represents a container for Time Series Data instances. It is used to share information with other entities and potentially to track, detect and report the missing data in Time Series. A *<timeSeries>* resource has no associated content. It has only attributes and child resources.



Figure 9.6.36-1: Structure of <*timeSeries*> resource

Table 9.6.36-1:Child resources of <*timeSeries*> resource

| Child Resources of *<timeSeries>* | Child Resource Type | Multiplicity | Description | *<timeSeriesAnnc>* Child Resource Types |
| --- | --- | --- | --- | --- |
| *[variable]* | *<semanticDescriptor>* | 0..n | See clause 9.6.30 | *<semanticDescriptor>, <semanticDescriptorAnnc>* |
| *[variable]* | *<timeSeriesInstance>* | 0..n | See clause 9.6.37 | *<timeSeriesInstance>,*  *<timeSeriesInstanceAnnc>* |
| *[variable]* | *<subscription>* | 0..n | See clause 9.6.8 | *<subscription>* |

The *<timeSeries>* resource shall contain the attributes specified in table 9.6.36-2.

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. If no *accessControlPolicyIDs* value is configured, the *accessControlPolicyIDs* of the parent resource shall be applied for privilege checking. | 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 |
| *stateTag* | 1 | RO | See clause 9.6.1.3. | OA |
| *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* | 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 *<timeSeriesInstance>* 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 |
| *currentNrOfnstances* | 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. This is the summation of *contentSize* attribute values of the <*timeSeriesInstance*> resources. 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 Sereis Data is periodic, this attribute shall contain the expected amount of time between two instances of Time Series Data. | 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* after which a missing Time Series Data shall be considered lost by the hosting CSE. Note that the setting of this value may not apply in certain transports such as TCP, and as such the hosting CSE may reject proposed values or suggest different values. | OA |
| NOTE: The access to this URI is out of scope of oneM2M. | | | | |

### -----------------------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?
* 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.?