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| CHANGE REQUEST | |
| Meeting:\* | ARC#28.1 |
| Source:\* | C-DOT |
| Date:\* | 2017-03-28 |
| Contact:\* | Poornima ([poornima@cdot.in](mailto:poornima@cdot.in)), Moode Giribabu Naik ([moode@cdot.in](mailto:moode@cdot.in)) |
| Reason for Change/s:\* | See the introduction |
| CR against: Release\* | Release 3 |
| CR against: WI\* | Active <Work Item number>  MNT maintenace / < Work Item number(optional)>  STE Small Technical Enhancements / < Work Item number (optional)>  Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0001 v2\_12\_2 |
| Clauses/Sub Clauses\* | 9.6.15 |
| 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 |
| 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  This CR is a mirror CR? YES  if YES, please indicate the document number of the original CR: : NO |
| Template Version:27 May 2015 (Dot 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 separated “mirror CR” should be posted at the same time of this CR

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 sections need not show surrounding clauses as long as the proposed section number clearly shows where the new section 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 changes in <mgmtObj> resource attributes *objectIDs* and *objectPaths*. Currently they are modifiable but it is mentioned in the description that these are provided at the time of creation of resource and shall not be modifiable afterwards as highlighted below:

|  |  |  |  |
| --- | --- | --- | --- |
| *objectIDs* | 0..1 (L) | RW | Contains the list URNs that uniquely identify the technology specific data model objects used for this *<mgmtObj>* resource as well as the managed function and version it represents. This attribute shall be provided during the creation of the *<mgmtObj>* resource and shall not be modifiable afterwards.  If the *<mgmtObj>* resource is mapped to multiple technology specific data model objects, this attribute shall list all URNs for each mapped technology specific data model objects. This is mandatory for the *<mgmtObj>*, for which the data model is not specified by oneM2M but mapped from technology specific data model. |
| *objectPaths* | 0..1 (L) | RW | Contains the list of local paths of the technology specific data model objects on the managed entity which is represented by the *<mgmtObj>* resource in the Hosting CSE.  This attribute shall be provided during the creation of the *<mgmtObj>*, so that the Hosting CSE can correlate the created *<mgmtObj>* with the technology specific data model object on the managed entity for further management operations. It shall not be modifiable after creation.  The format of this attribute shall be a local technology specific data model object path in the form as specified by technology specific protocol. (e.g. "./anyPath/Fw1" in OMA DM [i.3], "Device.USBHosts.Host.3." in BBF TR‑069 [i.2]).  The combination of the *objectPaths* and the *objectIDs* attribute, allows to address the technology specific data model. |

So CR proposes change the type to “WO” from “RW” .

*Note: this change needs to be reflected in all the <mgmtObj> resources. The change can be initiated after we agree with this change.*

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

### 9.6.15 Resource Type *mgmtObj*

The *<mgmtObj>* resource contains management data which represents individual M2M management functions. It represents a general structure to map to technology specific data model e.g. OMA DM [i.3], BBF TR-069 [i.2] and LWM2M [i.4]. Each instance of *<mgmtObj>* resource shall be mapped to single technology specific protocol.



Figure 9.6.15-1: Structure of *<mgmtObj>* resource

The *<mgmtObj>* resource shall contain the child resource specified in table 9.6.15-1.

Table 9.6.15-1: Child resources of *<mgmtObj>* resource

| Child Resources of *<mgmtObj>* | Child Resource Type | Multiplicity | Description | *<mgmtObjAnnc>* Child Resource Type |
| --- | --- | --- | --- | --- |
| *[variable]* | *<subscription>* | 0..n | See clause 9.6.8 | *<subscription>* |
| *[variable]* | *<semanticDescriptor>* | 0..n | See clause 9.6.30 | *<semanticDescriptor>, <semanticDescriptorAnnc>* |

The *<mgmtObj>* resource shall contain the attributes specified in table 9.6.15-2.

Table 9.6.15-2: Attributes of *<mgmtObj>* resource

| Attributes of *<mgmtObj>* | Multiplicity | RW/  RO/  WO | Description | *<mgmtObjAnnc>* 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 |
| *creationTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *lastModifiedTime* | 1 | RO | See clause 9.6.1.3. | NA |
| *labels* | 0..1 (L) | RW | See clause 9.6.1.3. | MA |
| *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 |
| *mgmtDefinition* | 1 | WO | Specifies the type of *<mgmtObj>* resource e.g. software, firmware, memory. The list of the value of the attribute can be seen in annex D. | MA |
| *objectIDs* | 0..1 (L) | WO | Contains the list URNs that uniquely identify the technology specific data model objects used for this *<mgmtObj>* resource as well as the managed function and version it represents. This attribute shall be provided during the creation of the *<mgmtObj>* resource and shall not be modifiable afterwards.  If the *<mgmtObj>* resource is mapped to multiple technology specific data model objects, this attribute shall list all URNs for each mapped technology specific data model objects. This is mandatory for the *<mgmtObj>*, for which the data model is not specified by oneM2M but mapped from technology specific data model. | OA |
| *objectPaths* | 0..1 (L) | WO | Contains the list of local paths of the technology specific data model objects on the managed entity which is represented by the *<mgmtObj>* resource in the Hosting CSE.  This attribute shall be provided during the creation of the *<mgmtObj>*, so that the Hosting CSE can correlate the created *<mgmtObj>* with the technology specific data model object on the managed entity for further management operations. It shall not be modifiable after creation.  The format of this attribute shall be a local technology specific data model object path in the form as specified by technology specific protocol. (e.g. "./anyPath/Fw1" in OMA DM [i.3], "Device.USBHosts.Host.3." in BBF TR‑069 [i.2]).  The combination of the *objectPaths* and the *objectIDs* attribute, allows to address the technology specific data model. | OA |
| *mgmtLink* | 0..1 (L) | RW | This attribute contains reference to a list of other *<mgmtObj>* resources in case a hierarchy of *<mgmtObj>* is needed. | OA |
| *[objectAttribute]* | 0..n | RW | Each *[objectAttribute]* is mapped from a leaf node of a hierarchical structured technology specific data model object (including oneM2M data model and the technology specific data model objects) based on the mapping rules below the table. | OA |
| *description* | 0..1 | RW | Text format description of <*mgmtObj>*. | OA |

When mapping objects from technology specific protocol to a corresponding *<mgmtObj>* resource, the following rules shall apply:

* The root objects of technology specific data model objects maps to the *<mgmtObj>* resource.
* For the child of the root of technology specific data model objects:

**Rule1:** If the child technology specific data model object cannot have another child technology specific data model object, the technology specific data model object maps to the *[objectAttribute]* attribute of the *<mgmtObj>* resource with the same resource name.

**Rule2:** If the child technology specific data model object can have another child technology specific data model object, the technology specific data model object maps to a new *<mgmtObj>* resource. The ID of the new *<mgmtObj>* resource is stored as an *mgmtLink* attribute of the *<mgmtObj>* resource which is mapped from the parent technology specific data model object.

### -----------------------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 only include a proposal to change only 3 tables. Includes any changes to references, definitions, and acronyms in the same deliverable?
* 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 sections need not show surrounding clauses as long as the proposed section number clearly shows where the new section 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.?