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| CHANGE REQUEST | |
| Meeting:\* | ARC#26.2 |
| Source:\* | C-DOT |
| Date:\* | 2016-12-15 |
| Contact:\* | Poornima ([poornima@cdot.in](mailto:poornima@cdot.in)),  Suman([ssheoran@cdot.in](mailto:ssheoran@cdot.in)) ,Anupama([anupama@cdot.in](mailto:anupama@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 v3\_1\_0 |
| Clauses/Sub Clauses\* | 9.6.13 |
| 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

In TS-0001, memberIDs denotes list of member resource identifiers, these ids refers to member resource or sub-group resource as highlighted below

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *memberIDs* | 1 (L) | RW | List of member resource IDs referred to in the remaining of the present document as *memberID*. Each ID (*memberID*) should refer to a member resource or a (sub-) *<group>* resource of the *<group>*. A <group> resource with an empty member list is allowed. | OA |

But how do we know that which member is of type sub-group as mentioned above?

**Examples:**

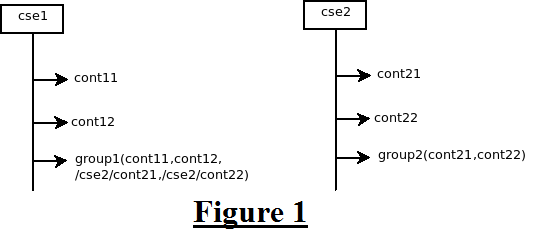


Figure 1: <group1> resource, members are of type containers residing on CSE1 and CSE2

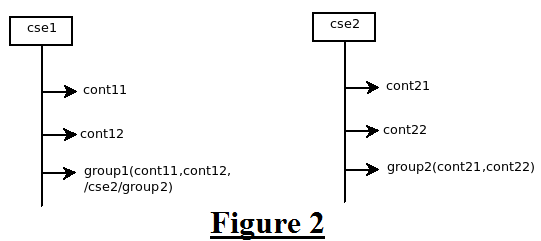


Figure 2 : <group1> resource, members are of type containers residing on CSE1 and of type group residing on CSE2.

In figure1, when all the members are of non-group type i.e. container, then on fanout, individual requests are to be sent. And in figure2, when there is a member of type group (sub-group), then a fanout request is to be sent but in both the cases cse1 doesn’t know that it’s a member resource or sub-group resource unless it stores the type of member at the time of validation of members or otherwise it needs to find out the types of all members before every fanout to differentiate between non-group and group type members.

**TS-0004:** Also here it assumes that it is known to CSE which member are of type sub-group as highlighted below:

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| --- |
| Fanout Request to each member If the parent group has no members, the group hosting CSE shall reject the request with the ***Response Status Code*** indicating "NO\_MEMBERS". Otherwise it shall perform  the following steps for each member:  a) The primitive parameters ***From*** and ***To*** shall be mapped to the primitive parameters of the corresponding Request to be sent out to each member of the group. The primitive parameter ***From*** shall be directly used. The prefix of primitive parameter ***To*** i.e. <URI of group resource>/fanOutPoint shall be replaced by hierarchical URIs derived from the attribute ***memberIDs*** of the group resource, but excluding the member resources which are sub-groups. For member resources that are sub-groups, the ***To*** parameter of the primitives shall be the resourceID of the *fanOutPoint* virtual resource of the sub-group resources. In addition, any additional relative address that was appended to .../fanOutPoint in the original Request shall be appended to each ***To*** URI. For those members resource contained in a sub-group, the primitive ***To*** of the composed Request shall be <URI of sub-group resource>/fanOutPoint plus any additional appended relative address including in the original Request. The group hosting CSE shall execute "Compose Request primitives". In addition, the group hosting CSE shall generate a unique group request identifier, add it as a primitive parameter to the Request and locally store the group request identifier as per the local policy. |

Since in TS-0001 & TS-0004, there is no clarity on how to identify that “whether the ID (*memberID*) refers to a member resource or a (sub-) *<group>* resource of the *<group>”*.

The CR proposes to add an attribute in <group> resource to keep the mapping of <group> type of members.

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

### 9.6.13 Resource Type *group*

The *<group>* resource represents a group of resources of the same or mixed types. The *<group>* resource can be used to do bulk manipulations on the resources represented by the *memberIDs* attribute. The *<group>* resource contains an attribute that represents the members of the group and the *<fanOutPoint>* virtual resource that enables generic operations to be applied to all the resources represented by those members. By grouping <*semanticDescriptor*> resources across which a semantic description is distributed, another virtual resource (<*semanticFanOutPoint*>) enables semantic discovery procedures to be applied across the full logical tree in the description.



Figure 9.6.13-1: Structure of *<group>* resource

The *<group>* resource shall contain the child resources specified in table 9.6.13-1.

Table 9.6.13-1: Child resources of <group> resource

| Child Resources of *<group>* | Child Resource Type | Multiplicity | Description | *<groupAnnc>* Child Resource Types |
| --- | --- | --- | --- | --- |
| *[variable]* | *<semanticDescriptor>* | *0..n* | *See clause 9.6.30* | *<semanticDescriptor>, <semanticDescriptorAnnc>* |
| *[variable]* | *<subscription>* | 0..n | See clause 9.6.8 | *<subscription>* |
| *fanOutPoint* | *<fanOutPoint>* | 1 | See clause 9.6.14 | none |
| *semanticFanOutPoint* | *<semanticFanOutPoint>* | 0..1 | See clause 9.6.14a | none |

The *<group>* resource shall contain the attributes specified in table 9.6.13-2.

Table 9.6.13-2: Attributes of *<group>* resource

| Attributes of  *<group>* | Multiplicity | RW/  RO/  WO | Description | *<groupAnnc>* 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 |
| *memberType* | 1 | WO | It is the resource type of the member resources of the group, if all member resources (including the member resources in any sub-groups) are of the same type. Otherwise, it is of type 'mixed'. | OA |
| *currentNrOfMembers* | 1 | RO | Current number of members in a group. It shall not be larger than *maxNrOfMembers*. | OA |
| *maxNrOfMembers* | 1 | RW | Maximum number of members in the *<group>*. | OA |
| *memberIDs* | 1 (L) | RW | List of member resource IDs referred to in the remaining of the present document as *memberID*. Each ID (*memberID*) should refer to a member resource or a (sub-) *<group>* resource of the *<group>*. A <group> resource with an empty member list is allowed. | OA |
| *memberSubGroupIDs* | 0..1(L) | RO | It is a subset of *memberIDs* attribute and contains *memberIDs* of type <group>. It distinguishes member resource and (sub-) <group> resource. It is derived at the time of *memberType* validation. | NA |
| *membersAccessControlPolicyIDs* | 0..1 (L) | RW | List of IDs of the *<accessControlPolicy>* resources defining who is allowed to access the *<fanOutPoint>* resource. | OA |
| *memberTypeValidated* | 0..1 | RO | Denotes if the resource types of all members resources of the group has been validated by the Hosting CSE. In the case that the *memberType* attribute of the <*group*> resource is not 'mixed', then this attribute shall be set.. | OA |
| *consistencyStrategy* | 1 | WO | This attribute determines how to deal with the *<group>* resource if the *memberType* validation fails. Its possible values are   * ABANDON\_MEMBER * ABANDON\_GROUP * SET\_MIXED   Which means delete the inconsistent member if the attribute is ABANDON\_MEMBER; delete the group if the attribute is ABANDON\_GROUP; set the *memberType* to "mixed" if the attribute is SET\_MIXED.  If it is not given by the Originator at the creation procedure, default is " ABANDON\_MEMBER " | OA |
| *groupName* | 0..1 | RW | Human readable name of the *<group>*. | OA |
| *semanticSupportIndicator* | 0..1 | RO | Indicator of support for sematic discovery functionality via <semanticFanOutPoint>. | OA |

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