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| CHANGE REQUEST |
| Meeting ID:\* | ARC 28 |
| Source:\* | Francisco Sang-Eon Kim, KT (TTA), kim.sangeon@kt.com |
| Date:\* | 2017-03-19 |
| Reason for Change/s:\* | Theaccess mode of *memberType* attribute of <*group*> resource has problem considering *consistencyStrategy* attribute. |
| CR against: Release\* | Release 3 |
| CR against: WI\* | [ ]  Active <Work Item number> [ ]  MNT maintenance Is this a mirror CR? Yes [ ]  No [ ] mirror CR number: (Note to Rapporteur - use latest agreed revision)[x]  STE Small Technical Enhancements / WI-0050Only ONE of the above shall be ticked |
| CR against: TS/TR\* | TS-0001-V3.4.0 |
| Clauses \* | * + 1. Resource Type group
 |
| Type of change: \* | [ ]  Editorial change[ ]  Bug Fix or Correction[x]  Change to existing feature or functionality[ ]  New feature or functionalityOnly ONE of the above shall be ticked |
| Impacted other TS/TR(s) | 7.4.13 in TS-0004 |
| 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 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

The *memberType* attribute is closely related to *consistencyStrategy* attribute. The descriptions are:

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 "

[case 1] single *memberType* of all reachable *memberIDs*

No issues.

[case 2] single memberType of partial reachable memberIDs

To deal with an unreachable *memberIDs,* it should check *consistencyStrategy.*

First, the consistencyStrategy shall ABANDON\_GROUP or ABANDON\_MEMBER in case of single memberType.

If the *consistencyStrategy* is SET\_MIXED, it is not clear to process.

Second, it is not clear to process for unreachable *memberIDs.* It depends on implementation.

[case3] mixed *memberType* and *consistencyStrategy* is SET\_MIXED

Third problem, it is not clear to process for unreachable memberIDs

This contribution proposes to resolve above issues by introducing *unreachableMemberIDs* and *enforcement* attributes.

An *unreachableMemberIDs* attribute is a list of *memberIDs* that is not reachable.

This is useful to check the validation of <group> resource. The TS-0004 is specified when *memberIDs* is not reachable, whole validation is performed again.

With this *unreachableMemberIDs* attribute, validation for <group> resource can perform to partial *memberIDs* not whole *memberIDs*

An *enforcement* attribute is value whether the unreachable *memberIDs* include or not. When enforcement is TRUE, operation(Create, Retrieve, Update, Delete) shall be performed even if *unreachableMemberIDs* exist.

When enforcement is FALSE, it may check reachability for *unreachableMemberIDs* or check *memberTypeValidated*.

The TS-0004 is not explicitly specified on this at this time.

The followings are possible procedure for protocol aspects. It needs to be discussed at PRO WG.

 

----------------------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>* |
| *fopt* | *<fanOutPoint>* | 1 | See clause 9.6.14 | none |
| *sfop* | *<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'.<*CSEBase*> shall not be *memberType*. When <*CSEBase*> needs to *memberType*, <*remoteCSE*> which is registered in registar shall be used. | 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 |
| *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

In case of ABANDON\_MEMBER, the <*group*> shall remove the inconsistent *memberIDs.*In case of ABANDON\_GROUP, the <*group*> shall not create or update to the group.In case of SET\_MIXED, the <*group*> shall set the *memberType* to "mixed" at *memberType* attribute.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 |
| *unreachableMemberIDs* | 0..1(L) | RW | List of *memberIDs* that is not reachable | NA |
| *enforcement* | 1 | WO | This is boolean value and default is TRUE. When *enforcement* is TRUE, operation shall be performed even if *unreachableMemberIDs* exist.When *enforcement* is FALSE, it may check reachability for *unreachableMemberIDs* or check *memberTypeValidated.* | MA |

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-----------------------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?
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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.?