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| CHANGE REQUEST |
| Meeting ID:\* | PRO 37 |
| Source:\* | Max Zhang, BOE, zhangqiancto@boe.com.cnAlbert Zhao, BOE, zhaojunjie111@boe.com.cn |
| Date:\* | 2018-09-12 |
| Reason for Change/s:\* | See introduction |
| CR against: Release\* | Rel 3 |
| CR against: WI\* | [ ]  Active <Work Item number> [x]  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-0004 3.7.0 |
| Clauses \* | 7.4.5.2.1 |
| 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) | TS-0001 |
| 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 [x]  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

Related CR is ARC-2018-0251.

Currently, in Clause 7.4.5.2.1, there is issues about re-registration to a new Registrar CSE:

In Situation 3:

* + Determine if <AEAnnc> resource already exists in the IN-CSE for the Registree AE. If so, compose an Update <AEAnnc> Request primitive to update the <AEAnnc> resource. If no <AEAnnc> resource already exists in the IN-CSE for the Registree AE, the receiver shall compose a Create <AEAnnc> Request primitive. In both cases, the request primitive shall have the following attribute values
		- The link attribute of the <AEAnnc> resource shall be set or updated to the SP-Relative-Resource-ID format of a - not yet existent - *<AE>* resource hosted on the Registrar CSE constructed with an Unstructured-CSE-relative-Resource-ID that is equal to the AE-ID-Stem value used for the Registree AE.

**Issue 1:**

The underline text describes the situation that an <AEAnnc> resource already exists on the IN-CSE that is associated with the Registree AE in case of re-registration, the operation for the Receiver is to send an UPDATE request for an <AEAnnc> resource to the IN-CSE. This operation is conflict with the concept of Resource Announcement.

In Resource Announcement description:

*The original resource Hosting CSE shall first check if the parent resource of the original resource has a representation at the announcement target CSE. If that is the case, the announced resource shall be created as a child resource of that the parent resource. If that is not the case, the original Hosting CSE shall next check if it has announced itself to the announcement target CSE. If that is the case, the announced resource shall be created as a child resource of the original Hosting CSE's <remoteCSEAnnc> resource. Otherwise, the original Hosting CSE shall first announce itself by creating a <remoteCSEAnnc> resource as a child resource of the <CSEBase> resource of the announcement target CSE. Next, the announced resource shall be created as a child resource of the original Hosting CSE's <remoteCSEAnnc> resource.*

According to this processing at the Receiver when initiating resource announcement, the <AEAnnc> resource should be a child resource of the original Hosting CSE's <remoteCSEAnnc> resource or the representation of original Hosting CSE(<remoteCSE> ). So once the Registree AE changed its registration point, the <AEAnnc> resource should change the place too. Only sending an UPDATE request to the IN-CSE dose not make sence.







It is suggested that to keep the consistence of oneM2M , the the operation for the Receiver in the case of re-registration should be:

1. determine if an <AEAnnc> resource already exists on the IN-CSE that is associated with the Registree AE
2. if so, the Receiver shall firstly send an UPDATE request for an <AEAnnc> resource to the IN-CSE in order to update the already existing <AEAnnc> resource on the IN-CSE that is associated with the Registree AE(change the registrationStatus attribute of the existing <AEAnnc> resource), and secondly the Receiver shall send an CREATE request for an <AEAnnc> resource to the IN-CSE in order to create an <AEAnnc> resource on the IN-CSE that is associated with the Registree AE.
3. the IN-CSE validate the request
4. the IN-CSE change the registrationStatus attribute of the old <AEAnnc> resource (tied to the old registration point) to INACTIVE, then the IN-CSE shall create <AEAnnc> resource with an Unstructured-CSE-relative-Resource-ID equal to the value of the provided AE-ID-Stem, and shall transfer all child-resources under the old <AEAnnc> resource to the newly created or updated <AEAnnc> resource
5. The IN-CSE shall update all references to the SP-Relative-Resource-ID references (e.g. in Announce links, Notification targets, group Member ID, <accessControlPolicy> resource OriginatorID lists) tied to the prior AE registration point, so that these refer to the new AE registration point. The IN-CSE shall manage the change in AE registration point
6. Upon reception of a successful response from the IN-CSE, the Registrar CSE shall use the Unstructured-CSE-relative-Resource-ID equal to the AE-ID-Stem provided by the Registree AE for the <AE> resource to be created on the Registrar CSE and continue

**Issue 2:**

In case of a car driving slowly, the registration point changed from MN-CSE3 to MN-CSE2. The sensor shall firstly de-register to MN-CSE3, and then register to MN-CSE2.



During the procedure of deleting the <AE> resource (de-registration), the corresponding <AEAnnc> resource would be set to INACTIVE according to current TS-0001.



During the procedure of re-registration to a new Registrar CSE, which comes an issue, there is an existing <AEAnnc> resource on the IN-CSE, but its status is “INACTIVE”.

So follow the current standard procedure(UPDATE the link attribute), the only result is getting an <AEAnnc> resource with the status of “INACTIVE”.



It is suggested that the description here could be more rigorous:

1. determine if an <AEAnnc> resource already exists on the IN-CSE that is associated with the Registree AE
2. if so, the Receiver shall check the status of the already existing <AEAnnc> resource, if the status is not “INACTIVE”, the Receiver shall firstly send an UPDATE request for an <AEAnnc> resource to the IN-CSE in order to update the already existing <AEAnnc> resource on the IN-CSE that is associated with the Registree AE(change the registrationStatus attribute of the existing <AEAnnc> resource), and secondly the Receiver shall send an CREATE request for an <AEAnnc> resource to the IN-CSE in order to create an <AEAnnc> resource on the IN-CSE that is associated with the Registree AE. Otherwise, if there is no already existing <AEAnnc> resource associated with the Registree AE or the status of the already existing <AEAnnc> resource on the IN-CSE is “INACTIVE”, the Receiver shall send a CREATE request for an <AEAnnc> resource to the IN-CSE in order to create an <AEAnnc> resource on the IN-CSE that is associated with the Registree AE.
3. the IN-CSE validate the request
4. the IN-CSE change the registrationStatus attribute of the old <AEAnnc> resource (tied to the old registration point) to INACTIVE, then the IN-CSE shall create <AEAnnc> resource with an Unstructured-CSE-relative-Resource-ID equal to the value of the provided AE-ID-Stem, and shall transfer all child-resources under the old <AEAnnc> resource to the newly created or updated <AEAnnc> resource
5. The IN-CSE shall update all references to the SP-Relative-Resource-ID references (e.g. in Announce links, Notification targets, group Member ID, <accessControlPolicy> resource OriginatorID lists) tied to the prior AE registration point, so that these refer to the new AE registration point. The IN-CSE shall manage the change in AE registration point
6. Upon reception of a successful response from the IN-CSE, the Registrar CSE shall use the Unstructured-CSE-relative-Resource-ID equal to the AE-ID-Stem provided by the Registree AE for the <AE> resource to be created on the Registrar CSE and continue

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

##### 7.4.5.2.1 Create

***Originator****:*

No change from the generic procedures in clause 7.2.2.1 with the with the following exception:

* A CSE shall not originate a Create <AE> resource request.

***Receiver****:*

Same as the generic procedures in clause 7.2.2.2 except replacement of Recv-6.3 procedure as follows:

1. The <serviceSubscribedNode> resource associated with the Hosting CSE shall be checked, using credential provided by the Originator, to determine if the requested registration is allowed by any of <serviceSubscribedAppRule> resources which are linked from the *ruleLinks* attribute.
2. If the check is failed, then the Hosting CSE shall return response primitive with a ***Response Status Code*** indicating "SECURITY\_ASSOCIATION\_REQUIRED" error.

Additional primitive specific operation on Recv-6.0.1"Requested operation is an AE registration?":

1. If the request is for an <AE> resource and if it is received at a MN-CSE or ASN-CSE with "/S" in the ***From*** parameter, but no specific AE-ID-Stem was provided with the CREATE request of the Registree AE, then this is an initial registration and the receiver shall execute the following steps in order.
	* Compose a Create <AEAnnc> Request primitive with the following attribute values
		+ The link attribute of the <AEAnnc> resource to be created shall be set to the SP-Relative-Resource-ID format of a - not yet existent - *<AE>* resource hosted on the Registrar CSE constructed with a Unstructured-CSE-relative-Resource-ID that is equal to the AE-ID-Stem value used for the Registree AE.
		+ The App-ID attribute of the *<AEAnnc>* resource to be created shall be present and set to the App-ID attribute value of the Registree AE.
		+ The concatenation of the string 'Credential-ID:' and the actual Credential-ID of the Security Association used by the Registree AE - if any - shall be placed into the labels attribute of the *<AE Annc>* resource. If no noSecurity Association was used by the Registree AE, a value of 'None' shall be used for Credential-ID.
	* The ***From*** parameter of the CREATE request for the *<AEAnnc>* resource shall be set to the SP-relative-CSE-ID or Absolute-CSE-ID followed by ‘/S’.
	* Send Create request to the IN-CSE that is associated with the Registree AE.
	* Wait for Response primitive.
		+ Upon reception of a successful response from the IN-CSE, the Registrar/Host CSE shall use the Unstructured-CSE-relative-Resource-ID that was used for the *<AEAnnc>* resource on the IN-CSE also as the assigned Unstructured-CSE-relative-Resource-ID for the *<AE>* resource to be created on the Registrar/Host CSE.
2. If the request is for an <AE> resource and if it is received at a MN-CSE or ASN-CSE with an AE-ID-Stem starting with "S", and this is an initial registration or a re-registration to the same Registrar CSE, then the receiver shall execute the following steps in order.
	* Determine if <AEAnnc> resource already exists in the IN-CSE for the Registree AE. If so, compose an Update <AEAnnc> Request primitive to update the <AEAnnc> resource. If no <AEAnnc> resource already exists in the IN-CSE for the Registree AE, the receiver shall compose a Create <AEAnnc> Request primitive. In both cases, the request primitive shall have the following attribute values
		+ The link attribute of the <AEAnnc> resource shall be set or updated to the SP-Relative-Resource-ID format of a - not yet existent - *<AE>* resource hosted on the Registrar CSE constructed with a Unstructured-CSE-relative-Resource-ID that is equal to the AE-ID-Stem value used for the Registree AE.
		+ The labels attribute of the <AEAnnc> resource shall be set or updated to the concatenation of the string 'Credential-ID:' and the Credential-ID of the Security Association used by the Registree AE, replacing the existing entry starting with 'Credential-ID:' if present. If no Security Association was used by the Registree AE, a value of 'None' shall be used for Credential-ID.
	* The ***From*** parameter of the CREATE or UPDATE request for the *<AEAnnc>* resource shall be set to the SP-relative-CSE-ID or Absolute-CSE-ID followed by ‘/’ and the AE-ID-Stem value.
	* The ***To*** parameter shall contain the SP-relative-Resource-ID format of the Resource ID for the *<AEAnnc>* resource which shall be constructed from the CSE-ID of the IN-CSE and the AE-ID-Stem that the Registree AE provided.
	* Send Create or Update request to the IN-CSE that is associated with the Registree AE.
	* Wait for Response primitive.
		+ Upon reception of a successful response from the IN-CSE, the Registrar/Host CSE shall use the Unstructured-CSE-relative-Resource-ID equal to the AE-ID-Stem provided by the Registree AE for the <AE> resource to be created on the Registrar/Host CSE.
3. If the request is for an <AE> resource and if it is received at a MN-CSE or ASN-CSE with an AE-ID-Stem starting with "S", and this is a re-registration to a new Registrar CSE, then the receiver shall execute the following steps in order.
	* Determine if <AEAnnc> resource already exists in the IN-CSE for the Registree AE and the status of the already existing <AEAnnc> resource is not “INACTIVE”. If so, compose an Update <AEAnnc> Request primitive to update the <AEAnnc> resource(change the registrationStatus attribute of the existing <AEAnnc> resource), and then compose an CREATE request for an <AEAnnc> resource to the IN-CSE in order to create an <AEAnnc> resource on the IN-CSE that is associated with the Registree AE. If no <AEAnnc> resource already exists in the IN-CSE for the Registree AE or <AEAnnc> resource already exists in the IN-CSE for the Registree AE but the status of the already existing <AEAnnc> resource is “INACTIVE”, the receiver shall compose a Create <AEAnnc> Request primitive. In both cases, the request primitive shall have the following attribute values
		+ The registrationStatus attribute of the existing <AEAnnc> resource shall be set to “INACTIVE”.
		+ The link attribute of the <AEAnnc> resource shall be set to the SP-Relative-Resource-ID format of a - not yet existent - *<AE>* resource hosted on the Registrar CSE constructed with an Unstructured-CSE-relative-Resource-ID that is equal to the AE-ID-Stem value used for the Registree AE.
		+ The labels attribute of the <AEAnnc> resource shall be set or updated to the concatenation of the string 'Credential-ID:' and the Credential-ID of the Security Association used by the Registree AE, replacing the existing entry starting with 'Credential-ID:' if present. If no Security Association was used by the Registree AE, a value of 'None' shall be used for Credential-ID.
	* The ***From*** parameter of the CREATE or UPDATE request for the *<AEAnnc>* resource shall be set to the SP-relative-CSE-ID or Absolute-CSE-ID followed by ‘/’ and the AE-ID-Stem value.
	* The ***To*** parameter shall contain the SP-relative-Resource-ID format of the Resource ID for the *<AEAnnc>* resource which shall be constructed from the CSE-ID of the IN-CSE and the AE-ID-Stem that the Registree AE provided.
	* Send Create or Update request to the IN-CSE that is associated with the Registree AE.
	* Wait for Response primitive.
		+ Upon reception of a successful response from the IN-CSE, the Registrar/Host CSE shall use the Unstructured-CSE-relative-Resource-ID equal to the AE-ID-Stem provided by the Registree AE for the <AE> resource to be created on the Registrar/Host CSE.

And addition of the following to step Recv-6.4:

* The Hosting CSE shall check for the presence of any resources having a AE-ID that matches the one specified in the request and that have the same parent as the new resource being created.
* If such a resource exists, then the Hosting CSE shall reject the request with a ***Response Status Code*** indicating "ORIGINATOR\_HAS\_ALREADY\_REGISTERED" error.

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

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

### -----------------------End of change 2---------------------------------------------

### -----------------------Start of change n-------------------------------------------

### -----------------------End of change n---------------------------------------------

### -----------------------Start of Changes to References Section -------------

### -----------------------End of Changes to References -------------

### -Start of changes to Definitions Symbols Abbreviations Acronyms -

### ---End of changes to Definitions, Symbols, Abbreviations, Acronyms ---

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.?