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| CHANGE REQUEST | |
| Meeting ID:\* | SDS #49 |
| Source:\* | Rahul, C-DOT, [krahul@cdot.in](mailto:krahul@cdot.in)  Poornima, C-DOT, [poornima@cdot.in](mailto:poornima@cdot.in)  Anupama, C-DOT, [anupama@cdot.in](mailto:anupama@cdot.in) |
| Date:\* | 2021-01-27 |
| Reason for Change/s:\* | Add procedures for service subscription active |
| CR against: Release\* | Release 4 |
| CR against: WI\* | Active - WI-0083 - oneM2M Service Subscribers and Users  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 V4.4 |
| Clauses \* | 7.2.2, 7.3.2.1 |
| 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) | N/A |
| 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

### The CR proposes to add checks for subscriber’s service subscription profile ACTIVE/INACTIVE.

R01:

Service subscription limits changes removed

Changes in clause 7.2.2.2 removed

Service subscription not established and not\_active change moved in clause 7.3.2.1: check validity of the received request primitive.

R02:

Minor corrections for changing registrar to receiver as it is already mentioned in the first condition.

Shall be processed removed.

Change3: Status code added for SERVICE\_SUBSCRIPTION\_NOT\_ACTIVE

R03:

Clause 7.3.2.7 is made void, all the changes are moved to clause 7.3.2.1

Changes specific to M2M service user check is merged as it fits in between the steps added in clause 7.3.2.1.

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

#### 7.3.2.7 Check Service Subscription Profile

Void

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

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

#### 7.3.2.1 Check the validity of received request primitive

The validity checking of the message carrying the received request primitive is specified by the protocol mapping Technical Specifications (CoAP binding [22], HTTP binding [23], MQTT binding [24], and Websocket binding [42]).

If the ***Request Expiration Timestamp*** is given in the request and has expired, the Receiver CSE shall reject the request with a "REQUEST\_TIMEOUT" ***Response Status Code*** parameter value.

If the ***From*** parameter is not present in the request, except in the case of an AE Create request, the Receiver CSE shall reject the request with a "BAD\_REQUEST" ***Response Status Code*** parameter value.

If the ***From*** parameter in a request from a Registree AE has any format other than AE-ID-Stem, the Receiver CSE shall reject the request with "BAD\_REQUEST" ***Response Status Code*** parameter value.

If the received request is communicated within an established Security Association (oneM2M TS-0003 [7]), and

* the Receiver knows that the Registree using the established Security Association is an AE; and
* the Receiver knows the AE-ID(s) of the Registree using the established Security Association; and
* the ***From*** parameter does not match the allowed AE-ID(s) of the Registree using the established Security Association;

then the request shall be rejected with an "ORIGINATOR\_HAS\_NOT\_REGISTERED" ***Response Status Code*** parameter value.

If the received request is communicated within an established Security Association, and:

* the Receiver knows that the Registree using the established Security Association is a CSE; and
* the Receiver knows the CSE -ID of the Registree using the established Security Association; and
* if one of the following applies:
* the ***From*** parameter is an CSE-ID that matches one of the Receiver's Registree CSE's CSE-ID other than the CSE-ID of the Registree using the established Security Association; or
* the ***From*** parameter is an CSE-Relative C-Type AE-ID-Stem; or
* the ***From*** parameter is an SP-Relative AE-ID or Absolute AE-ID with a C-Type AE-ID-Stem, and the CSE-ID portion of the ***From*** parameter matches one of the Receiver's Registree CSE's CSE-ID other than the CSE-ID of the Registree for the established Security Association;

then the request shall be rejected with an "ORIGINATOR\_HAS\_NOT\_REGISTERED" ***Response Status Code*** parameter value.

NOTE: An SP-Relative-AE-ID or Absolute AE-ID with a C-Type AE-ID-Stem always includes a CSE-ID portion (see oneM2M TS-0001 [6]).

If the received request is communicated outside of an established Security Association; and:

* if the ***From*** parameter includes an AE-ID; and
* the request is not a CREATE <AE> Request; and
* the ***From*** parameter does not match the AE-ID of an AE currently registered to the Receiver;

then the request shall be rejected with an "ORIGINATOR\_HAS\_NOT\_REGISTERED" ***Response Status Code*** parameter value.

If the received request is communicated outside of an established Security Association, and the ***From*** parameter includes a CSE-ID, then the request shall be rejected with a "SECURITY\_ASSOCIATION\_REQUIRED" ***Response Status Code*** parameter value.

If the ***From*** parameter indicates the received request is from an AE and the receiver is the Registrar for this AE,

* The receiver CSE shall have the subscriber’s profile information (see clause 11.1 and 11.2.1 of oneM2M TS-0001) stored locally or retrieved from the IN-CSE. If the subscriber's service subscription profile is not available to the CSE, then the Receiver CSE shall respond with a “SERVICE\_SUBSCRIPTION\_NOT\_ESTABLISHED” error.
* The Receiver shall check if a <*serviceSubscribedNode*> child resource of the subscriber's <m2mService SubscriptionProfile> resource exists, with a CSE-ID attribute that matches the Receiver owned CSE‑ID. If this condition is not met, then the Receiver CSE shall respond with a “SERVICE\_SUBSCRIPTION\_NOT\_ESTABLISHED” error.
* The Receiver shall check if <*serviceSubscribedAppRule*> resource(s) is found corresponding to the ruleLinks attribute of <*serviceSubscribedNode*> resource. If no linked <*serviceSubscribedAppRule*> resource(s) is found, then the Receiver CSE shall respond with an “SERVICE\_SUBSCRIPTION\_NOT\_ESTABLISHED” error.
* If subscriber's service subscription profile is available to the Receiver CSE then it shall check the *status* attribute value in <*m2mServiceSubscriptionProfile*>. If the *status* attribute value is INACTIVE, then the Receiver CSE shall respond with a “SERVICE\_SUBSCRIPTION\_NOT\_ACTIVE” error.
* The Receiver shall check if request contains a ***M2M Service User*** parameter, then check that there is a <*serviceSubscribedUserProfile*> resource that is referenced by the *allowedUsers* attribute of at least one of the Registree AE’s <*serviceSubscribedAppRule*> resource(s), and has an *M2M-User-ID* attribute that matches the ***M2M Service Use***r parameter. If this is not the case, then the request shall be rejected with an "UNAUTHORIZED\_USER" ***Response Status Code*** parameter value.
* The Receiver shall further check whether the Registree AE complies with the linked (i.e. *ruleLinks* attribute) <*serviceSubscribedAppRules*> resource(s), see Clause 9.6.29 of oneM2M TS-0001 [6]. If rule link validation fails for the request, then the Receiver CSE shall respond with an “APP\_RULE\_VALIDATION\_FAILED” error.

If a received request needs to be forwarded to another CSE and if CMDH processing is supported, then in addition, the "CMDH message validation procedure" defined in clause H.2.3 shall be carried out.

If the message is not valid, the request shall be rejected with a ***Response Status Code*** indicating "BAD\_REQUEST" error.

If ***Resource Type*** is not present or is invalid in a CREATE request, the request shall be rejected with a ***Response Status Code*** indicating "BAD\_REQUEST" error.

If the ***Filter Criteria*** parameter is included in a CREATE request, the request shall be rejected with a ***Response Status Code*** indicating "BAD\_REQUEST" error.

If the ***Result Content*** is invalid for a given operation (Refer TS-0001 Table8.1.2-1: Summary of Result Content Values) then the Hosting CSE shall reject the request with a ***Response Status Code*** indicating "BAD\_REQUEST" error.

If the receiver does not support the content format (i.e. type of serialization) requested by the originator, the request may be rejected with a ***Response Status Code*** indicating "NOT\_ACCEPTABLE" error.

If the receiver does not support the content format sent by the originator, the request may be rejected with a ***Response Status Code*** indicating "UNSUPPORTED\_MEDIA\_TYPE" error.

If the ***Release Version Indicator*** is not present in the request the Receiver CSE shall add the ***Release Version Indicator*** with value set to 1.

If the Receiver CSE is the Hosting CSE and it does not support the release value present in the ***Release Version Indicator*** then the request shall be rejected with a ***Response Status Code*** indicating "RELEASE\_VERSION\_NOT\_SUPPORTED" error.

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

### -----------------------Start of change 3-------------------------------------------

#### 6.6.3.5 Originator error response class

Table 6.6.3.5-1 specifies the RSCs for Originator error responses.

41xx codes are oneM2M specific.

Table 6.6.3.5‑1: RSCs for Originator error response class

|  |  |
| --- | --- |
| Numeric Code | Description |
| 4000 | BAD\_REQUEST |
| 4001 | RELEASE\_VERSION\_NOT\_SUPPORTED |
| 4004 | NOT\_FOUND |
| 4005 | OPERATION\_NOT\_ALLOWED |
| 4008 | REQUEST\_TIMEOUT |
| 4015 | UNSUPPORTED\_MEDIA\_TYPE |
| 4101 | SUBSCRIPTION\_CREATOR\_HAS\_NO\_PRIVILEGE |
| 4102 | CONTENTS\_UNACCEPTABLE |
| 4103 | ORIGINATOR\_HAS\_NO\_PRIVILEGE |
| 4104 | GROUP\_REQUEST\_IDENTIFIER\_EXISTS |
| 4105 | CONFLICT |
| 4106 | ORIGINATOR\_HAS\_NOT\_REGISTERED |
| 4107 | SECURITY\_ASSOCIATION\_REQUIRED |
| 4108 | INVALID\_CHILD\_RESOURCE\_TYPE |
| 4109 | NO\_MEMBERS |
| 4110 | GROUP\_MEMBER\_TYPE\_INCONSISTENT |
| 4111 | ESPRIM\_UNSUPPORTED\_OPTION |
| 4112 | ESPRIM\_UNKNOWN\_KEY\_ID |
| 4113 | ESPRIM\_UNKNOWN\_ORIG\_RAND\_ID |
| 4114 | ESPRIM\_UNKNOWN\_RECV\_RAND\_ID |
| 4115 | ESPRIM\_BAD\_MAC |
| 4116 | ESPRIM\_IMPERSONATION\_ERROR |
| 4117 | ORIGINATOR\_HAS\_ALREADY\_REGISTERED |
| 4118 | ONTOLOGY\_NOT\_AVAILABLE |
| 4119 | LINKED\_SEMANTICS\_NOT\_AVAILABLE |
| 4120 | INVALID\_SEMANTICS |
| 4121 | MASHUP\_MEMBER\_NOT\_FOUND |
| 4122 | INVALID\_TRIGGER\_PURPOSE |
| 4123 | ILLEGAL\_TRANSACTION\_STATE\_TRANSITION\_ATTEMPTED |
| 4124 | BLOCKING\_SUBSCRIPTION\_ALREADY\_EXISTS |
| 4125 | SPECIALIZATION\_SCHEMA\_NOT\_FOUND |
| 4126 | APP\_RULE\_VALIDATION\_FAILED |
| 4127 | OPERATION\_DENIED\_BY\_REMOTE\_ENTITY |
| 4128 | SERVICE\_SUBSCRIPTION\_NOT\_ESTABLISHED |
| 4130 | ONTOLOGY\_MAPPING\_ALGORITHM\_NOT\_AVAILABLE |
| 4131 | ONTOLOGY\_MAPPING\_POLICY\_NOT\_MATCHED |
| 4132 | ONTOLOGY\_MAPPING\_NOT\_AVAILABLE |
| 4133 | BAD\_FACT\_INPUTS\_FOR\_REASONING |
| 4134 | BAD\_RULE\_INPUTS\_FOR\_REASONING |
| 4135 | DISCOVERY\_LIMIT\_EXCEEDED |
| 4136 | PRIMITIVE\_PROFILE\_NOT\_ACCESSIBLE |
| 4137 | PRIMITIVE\_PROFILE\_BAD\_REQUEST |
| 41xx | SERVICE\_SUBSCRIPTION\_NOT\_ACTIVE |

### -----------------------End of change 3-------------------------------------------