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| CHANGE REQUEST |
| Meeting ID:\* |  SDS #57 |
| Source:\* | Poornima Shandilya, C-DOT, poornima@cdot.inSuman Singh, C-DOT, ssheoran@cdot.in Rahul Kumar, C-DOT, krahul@cdot.in Anupama Chopra, C-DOT, anupama@cdot.in Siddharth Trikha, C-DOT, strikha@cdot.in  |
| Date:\* | 2022-10-31 |
| Reason for Change/s:\* | Expiration time in service subscription profile |
| CR against: Release\* | Release 4 |
| CR against: WI\* | [ ]  Active WI-xxxx[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-0001 4.16.1 |
| Clauses \* |  |
| Type of change: \* | [ ]  Editorial change[x]  Bug Fix or Correction[ ]  Change to existing feature or functionality[ ]  New feature or functionalityOnly ONE of the above shall be ticked |
| Impacted other TS/TR(s) |  |
| 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

When *serviceSubscriptionDuration* attribute is set in the resource then it should not exceed the *expirationTime* attribute of <m2mServiceSubscriptionProfile> resource else it may lead to situation where an agreement is created for 6 months but the resource is deleted before that time due to its expiration.

The CR proposes to add a validation to ensure that duration in *serviceSubscriptionDuration* attribute is always less than *expirationTime* attribute of this resource.

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### 9.6.19 Resource Type *m2mServiceSubscriptionProfile*

The *<m2mServiceSubscriptionProfile>* resource represents an M2M Service Subscription. It is used to represent all data pertaining to the M2M Service Subscription, i.e. the technical part of the contract between an M2M Application Service Provider and an M2M Service Provider and is only stored on IN-CSE. The data is also represented in <serviceSubscribedNode>, <serviceSubscribedAppRule> and <*serviceSubscribedUserProfile*> resources as well as <m2mServiceSubscriptionProfile> resource. The relationship among those resource types is depicted as follows. Note that the diagram does not capture all attributes and child resources. Those resource types shall only be instantiated on IN-CSE.



Figure 9.6.19-1: Relationship among M2M Service Subscription related resources

The *<m2mServiceSubscriptionProfile>* resource shall contain the child resources specified in table 9.6.19-1.

Table 9.6.19-1: Child resources of *<m2mServiceSubscriptionProfile>* resource

| Child Resources of *<m2mServiceSubscriptionProfile>* | Child Resource Type | Multiplicity | Description |
| --- | --- | --- | --- |
| *[variable]* | *<subscription>* | 0..n | See clause 9.6.8 |
| *[variable]* | *<serviceSubscribedNode>* | 0..n | See clause 9.6.20 |
| *[variable]* | *<transaction>* | 0..n | See clause 9.6.48 |
| *[variable]* | *<serviceSubscribedUserProfile>* | 0..n | See clause 9.6.68 |

The *<m2mServiceSubscriptionProfile>* resource shall contain the attributes specified in table 9.6.19-2.

Table 9.6.19-2: Attributes of *<m2mServiceSubscriptionProfile>* resource

| Attributes of *<m2mServiceSubscriptionProfile>* | Multiplicity | RW/RO/WO | Description |
| --- | --- | --- | --- |
| *resourceType* | 1 | RO | See clause 9.6.1.3. |
| *resourceID* | 1 | RO | See clause 9.6.1.3. |
| *resourceName* | 1 | WO | See clause 9.6.1.3. |
| *parentID* | 1 | RO | See clause 9.6.1.3. |
| *expirationTime* | 1 | RW | See clause 9.6.1.3. |
| *accessControlPolicyIDs* | 0..1 (L) | RW | See clause 9.6.1.3.  |
| *creationTime* | 1 | RO | See clause 9.6.1.3. |
| *Labels* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *lastModifiedTime* | 1 | RO | See clause 9.6.1.3. |
| *dynamicAuthorizationConsultationIDs* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *Custodian* | 0..1 | RW | See clause 9.6.1.3. |
| *M2M-Sub-ID* | 1 | WO | The identifier assigned by the M2M Service Provider for this M2M Service Subscription. |
| *M2M-SS-ID* | 0..1 | RW | The identifier assigned by the M2M Service Provider to the M2M Service Subscriber associated with this M2M Service Subscription. |
| *Status* | 1 | RO | Indicates the active/inactive status of this M2M Service Subscription.The Hosting CSE shall set this attribute to "ACTIVE" when the value of *activate* attribute is set to TRUE and "INACTIVE" when the value of the *activate* attribute is set to FALSE. |
| *Activate* | 1 | RW | Used to activate or deactivate this M2M Service Subscription. When this attribute is set to a value of TRUE, the Hosting CSE shall activate this M2M Service Subscription. When this attribute is set to a value of FALSE, the Hosting CSE shall deactivate this M2M Service Subscription. The default value of the attribute is FALSE.The attribute shall be set to value of FALSE by the Hosting CSE on end of *serviceSubscriptionDuration*. To activate the service subscription again, this attribute shall be set to a value of TRUE. |
| *activationTime* | 0..1 | RO | M2M Service Subscription Activation Time. It is the time from which an M2M Service Provider activates the services of an M2M subscriber. The value of this attribute shall be set to current time when *activate* is set to TRUE. |
| *deactivationTime* | 0..1 | RO | M2M Service Subscription Deactivation Time. It is the time on which an M2M Service Provider deactivates the services of an M2M subscriber. The value of this attribute shall set to the time when *activate* transition from TRUE to FALSE. |
| *serviceSubscriptionDuration* | 0..1 | RW | It indicates the duration of the contract between an M2M Subscriber and M2M Service Provider. When a service subscription reaches the end of this duration, the Hosting CSE shall set the *activate* attribute to a value of FALSE. When an ACTIVE service subscription is deactivated by setting *activate* to FALSE, the Hosting CSE shall recalculate the duration of time for which the service subscription was active and update the value of this attribute. The attribute value shall not exceed limit set by the *expirationTime* attribute of this resource. |
| *currentNumAEs* | 1 | RO | For this M2M Service Subscription, the Hosting CSE shall keep track of the current number of *<AE>* resources created on the Hosting CSE. |
| *maxNumAEs* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the maximum number of <*AE*> resources created on the Hosting CSE to this limit, if configured. If a request is received to create an <*AE*> resource once this limit is reached, the Hosting CSE shall return an error indicating that the maximum number of allowed <*AE*> resources has been reached. |
| *currentNumNodes* | 1 | RO | For this M2M Service Subscription, the Hosting CSE shall keep track of the current number of <*node*> resources created on the Hosting CSE. |
| *maxNumNodes* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the maximum number of <*node*> resources created on the Hosting CSE to this limit, if configured. If a request is received to create a <*node*> resource once this limit is reached, the Hosting CSE shall return an error indicating the maximum number of allowed <*node*> resources has been reached. |
| *maxNumBytes* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the aggregate amount of bytes stored on the Hosting CSE to this limit, if configured. This limit shall be applied to Content Sharing Resources only (i.e. <*container*>, <*contentInstance*>, <*flexContainer*>, <*flexContainerInstance*>, <*timeSeries*> and <*timeSeriesInstance*>). If a request is received to create a Content Sharing Resource that will result in exceeding this limit, the Hosting CSE shall return an error that the maximum number of allowed bytes has been reached.A Hosting CSE may take the value of the *maxNumBytes* attribute as well as other attributes (e.g. *maxNumContainers*, *maxNumContentInstances*, etc.) into account when determining a limit to enforce on the *maxByteSize* attribute of individual Content Sharing Resources, if applicable. How a Hosting CSE allocates the *maxNumBytes* across individual Content Sharing Resources is based on local policy.  |
| *maxNumUsers* | 0..1 | RW | Maximum number of allowed M2M Service Users associated with this M2M Service Subscription. |
| *maxRequestRate* | 0..1 | RW | If a Hosting CSE receives requests for this M2M Service Subscription at a rate which exceeds the limit defined by this attribute, the Hosting CSE may throttle the processing of the requests. The Hosting CSE may throttle processing of requests by delaying responses and/or by returning an error indicating that the maximum allowed request rate has been reached. |
| *maxNumContainers* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the maximum number of <*container*> resources created on the Hosting CSE to this limit, if configured. If a request is received to create a <*container*> resource once this limit is reached, the Hosting CSE shall return an error indicating the maximum number of allowed <*container*> resources has been reached. |
| *maxNumInstancesPerContainer* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the value of the *maxNrOfInstances* attribute of a <*container*> resource on the Hosting CSE to this limit, if configured. |
| *maxNumTimeSeries* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the maximum number of <*timeSeries*> resources created on the Hosting CSE to this limit, if configured. If a request is received to create a <*timeSeries*> resource once this limit is reached, the Hosting CSE shall return an error indicating the maximum number of <*timeSeries*> resources has been reached. |
| *maxNumInstancesPerTimeSeries*  | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the value of the *maxNrOfInstances* attribute of a <*timeSeries*> resource on the Hosting CSE to this limit, if configured. |
| *maxMembersPerGroup* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the value of the *maxNrOfMembers* attribute of a <*group*> resource on the Hosting CSE to this limit, if configured. |
| *maxNotificationRate* | 0..1 |  | The Hosting CSE shall restrict the maximum rate of notifications for this M2M Service Subscription to this limit, if configured.A Hosting CSE shall also restrict the maximum value of the *rateLimit* attribute of <*subscription*> resources associated with this M2M Service Subscription to this limit,if configured. |
| *maxNumFlexContainers* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the maximum number of <*flexContainer*> resources created to this limit, if configured. If a request is received to create a <*flexContainer*> resource once this limit is reached, the Hosting CSE shall return an error indicating the maximum number of allowed <*flexContainer*> resources has been reached. |
| *maxNumInstancesPerFlexContainer* | 0..1 | RW | For this M2M Service Subscription, the Hosting CSE shall limit the value of the *maxNrOfInstances* attribute of a <*flexContainer*> resource on the Hosting CSE to this limit, if configured. |
| *defaultAccessControlPrivileges* | 0..1(L) | RW | A list of resource identifiers of default access control policies to link to a resource if/when the *accessControlPolicyIDs* attribute of a resource created by an entity associated with this M2M Service Subscription is not configured. |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 1 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 10.2.12.2 Create *<m2mServiceSubscriptionProfile>*

This procedure shall be used for creating a *<m2mServiceSubscriptionProfile>* resource.

Table 10.2.12.2-1: *<m2mServiceSubscriptionProfile>* CREATE

| *<m2mServiceSubscriptionProfile>* CREATE  |
| --- |
| Information in Request message | All parameters defined in table 8.1.2-3 apply with the specific details for:***To:*** The Receiver or Hosting CSE shall be an IN-CSE.***Content:*** The resource content shall provide the information as defined in clause 9.6.19. |
| Processing at Originator before sending Request | According to clause 10.1.2. |
| Processing at Receiver | According to clause 10.1.2.The Receiver shall configure the value of the *status* attribute of this <*m2mServiceSubscriptionProfile>* resource based on the values of the *activate* attribute of this <*m2mServiceSubscriptionProfile>* resourceas described in table 9.6.19-2*.*The Receiver shall reject the request if the value of the *serviceSubscriptionDuration* attribute exceeds the limit set by the *expirationTime* attribute of this resource. |
| Information in Response message | All parameters defined in table 8.1.3-1 apply with the specific details for:***Content:*** * Address of the created *<m2mServiceSubscriptionProfile>* resource, according to clause 10.1.2.
* If the Receiver overrides and configures any attributes with values different than the values specified in the request by the Originator, the Receiver shall return the values back to the Originator in the response depending on the ***Result Content*** value specified by the Originator.
 |
| Processing at Originator after receiving Response | According to clause 10.1.2. |
| Exceptions | According to clause 10.1.2. |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 2 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* Start of Change 3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

#### 10.2.12.4 Update *<m2mServiceSubscriptionProfile>*

This procedure shall be used for updating the attributes of a *<m2mServiceSubscriptionProfile>* resource.

Table 10.2.12.4-1: *<m2mServiceSubscriptionProfile>* UPDATE

|  |
| --- |
| *<m2mServiceSubscriptionProfile>* UPDATE |
| Information in Request message | All parameters defined in table 8.1.2-3 are applicable as indicate in the table with the specific details for:***To*:** The Receiver or Hosting CSE shall be an IN-CSE.***Content*:** Attributes of the *<m2mServiceSubscriptionProfile>* resource as defined in clause 9.6.19 which need be updated, with the exception of the following that cannot be modified:* "*lastModifiedTime*".
 |
| Processing at Originator before sending Request | According to clause 10.1.4. |
| Processing at Receiver | According to clause 10.1.4.If the request is to update an attribute specifying a limit (e.g. *maxNumNodes*, *maxNumContainers*, etc.) to a reduced value, the Receiver shall update the attribute with the reduced value if the limit corresponding to the reduced value has not yet been exceeded. For example, if *maxNumNodes* has a value of 10 and the request is to update it to a value of 5 and only 4 <*node*> resources associated with this service subscription have been created thus far, then the Receiver shall update *maxNumNodes* attribute to a value of 5. However, if the limit corresponding to the reduced value in the request has already been exceeded, the Receiver shall reject the request or override the value specified in the request. For example, if the *maxNumNodes* attribute has a value of 10 and the request is to update it to a value of 5 but 6 <*node*> resources associated with this service subscription have already been created, then the Receiver shall either reject the request or update the value of the *maxNumNodes* attribute to 6.If the request contains *serviceSubscriptionDuration* attribute or *expirationTime* attribute and if the value of the *serviceSubscriptionDuration* attribute exceeds the limit set by the *expirationTime* attribute of this resource, then the Receiver shall reject the request. |
| Information in Response message | According to clause 10.1.4.If the Receiver overrides and configures any attributes with values different than the values specified in the request by the Originator, the Receiver shall return the values back to the Originator in the response depending on the ***Result Content*** value specified by the Originator. |
| Processing at Originator after receiving Response | According to clause 10.1.4. |
| Exceptions | According to clause 10.1.4 |

### \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change 3 \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*