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| CHANGE REQUEST |
| Meeting ID:\* | ARC 35 |
| Source:\* | Bob Flynn, Convida Wireless; Bob.Flynn@convidawireless.com |
| Date:\* | 2018-5-22 |
| Reason for Change/s:\* | Updates related to <crossResourceSubscription> |
| CR against: Release\* | Rel 3 |
| CR against: WI\* | [ ]  Active <Work Item number> [x]  MNT maintenance / < Work Item number(optional)>WI-0055Is this a mirror CR? Yes [ ]  No [x] 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 V3.11.0 |
| Clauses \* | 9.6.58, 9.6.59 |
| 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) | <TS/TR number>, <Version Number>, and <Description on which aspect should be reflected in this TS/TR> |
| 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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# Introduction

This contribution addresses changes that were made to <crossResourceSubscription> while working on the protocol level contributions.

Basic concept for these changes is that while this resource re-uses the main concepts of <subscription> resources, it is not intended to have all of the uses of the <subscription> resource this does not prohibit underlying subscriptions from using all of the features, just the top level <crossResourceSubscription> does not have them all.

Change 1: Remove *notificationContentType*

Notification is an indication that ALL of the subscription conditions of the relevant <subscription> resources occurred. Since there are multiple subscriptions, use of this attribute becomes ambiguous in terms of what information it contains.

Change 2: Remove Resource Type *subscriptionLinkDeletion*

This was a new procedure to keep <crossResourceSubscription> synchronized with link in <subscription> resource. We were able to use the existing procedures to implement this synchronization.

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

### 9.6.58 Resource Type *crossResourceSubscription*

The <*crossResourceSubscription*> resource represents a cross-resource subscription over a set of target resources which could be existing *<subscription>* and/or other subscribable oneM2M resources. The Hosting CSE shall generate a cross-resource notifications only when expected changes occur on a designated number of target resources concurrently within a time window. The <*crossResourceSubscription*> resource shall specify the involved target resources in order to generate cross-resource notification.

The <*crossResourceSubscription*> resource shall contain the child resources specified in Table 9.6.58-1.

Table 9.6.58-1: Child resources of <*crossResourceSubscription*> resource

| Child Resources of <*crossResourceSubscription*> | Child Resource Type | Multiplicity | Description |
| --- | --- | --- | --- |
| *notificationSchedule* | *<schedule>* | 0..1 | See clause 9.6.9. |
| *[variable]* | *<notificationTargetMgmtPolicyRef>* | 0..n | See clause 9.6.31. |
| *nstr* | *<notificationTargetSelfReference>* | 1 | See clause 9.6.34. |
| *sld* | *<subscriptionLinkDeletion>* | 1 | A virtual resource which shall be used by a *<subscription>* Hosting CSE, if the *<subscription>* is included in the *subscriptionResourcesAsTarget* list of this <crossResourceSubscription> resource, to delete the *<subscription>* resource from the list. |

The <*crossResourceSubscription*> resource shall contain the attributes specified in Table 9.6.58-2.

Table 9.6.58-2: Attributes of <*crossResourceSubscription*> resource

| Attributes of <*crossResourceSubscription*> | 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. |
| *labels* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *creationTime* | 1 | RO | See clause 9.6.1.3. |
| *lastModifiedTime* | 1 | RO | See clause 9.6.1.3. |
| *stateTag* | 1 | RO | See clause 9.6.1.3. |
| *announceTo* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *announcedAttribute* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *dynamicAuthorizationConsultationIDs* | 0..1 (L) | RW | See clause 9.6.1.3. |
| *creator* | 1 | RO | See clause 9.6.1.3. |
| *expirationCounter* | 0..1 | RW | See clause 9.6.8. |
| *notificationURI* | 1 (L) | RW | See clause 9.6.8. |
|  |  |  |  |
| *notificationEventCat* | 0..1 | RW | See clause 9.6.8. |
| *subscriberURI* | 0..1 | WO | See clause 9.6.8. |
| *regularResourcesAsTarget* | 0..1(L) | RW | This attribute indicates a list of regular resources (i.e. normal resources rather than *<subscription>* resources), which shall be used as the target resource for this cross-resource subscription. Here, the regular resource is referred to as any subscribable oneM2M resources.  |
| *subscriptionResourcesAsTarget* | 0..1(L) | RW | This attribute indicates a list of existing *<subscription>* resources, which shall be used as the target resource for this cross-resource subscription.  |
| *timeWindowType* | 1 | RW | This attribute indicates the type of time window mechanisms (e.g. *timeWindowType*=1 stands for periodic time window without any overlapping and *timeWindowType*=2 represents sliding time window where current time window will be slided to become next time window when a cross-resource notification is generated for instance) which will be used to determine the generation of a cross-resource notification.  |
| *timeWindowSize* | 1 | RW | This attribute indicates the size or time duration (e.g. in seconds) of the time window, based on which cross-resource notifications shall be generated. Note that the maximum window size (e.g. 60 seconds) may be enforced by the Hosting CSE for a subscriber; if the *timeWindowSize* indicated or requested by a subscriber is larger than the maximum window size, the Hosting CSE may reject the subscriber’s request for cross-resource subscription.  |
| *eventNotificationCriteriaSet* | 0..1(L) | RW | This attribute lists *eventNotificationCriteria* for each regular target resource as indicated in *regularResourcesAsTarget* attribute and involved in a cross-resource subscription. If there is only one *eventNotificationCriteria* contained in this attribute, it shall be applied to all target resources as indicated by *regularResourcesAsTarget* attribute. If only *subscriptionResourcesAsTarget* attribute appears (i.e. no *regularResourcesAsTarget* attribute), *eventNotificationCriteriaSet* shall not be needed. See clause 9.6.8 for the description of *eventNotificationCriteria*. |

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

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

### 9.6.59 VOID

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