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| CHANGE REQUEST |
| Meeting ID:\* | PRO 38 |
| Source:\* | Catalina Mladin, Convida Wireless, Mladin.Catalina@ConvidaWireless.com  |
| Date:\* | 2018-10-25 |
| Reason for Change/s:\* | See Introduction |
| CR against: Release\* | Rel-3 |
| CR against: WI\* | [ ]  Active [x]  MNT maintenanceIs this a companion CR? Yes [ ]  No [ ] Companion CR number: (Note to Rapporteur - use latest agreed revision)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\* | WI-0049 – Maintenance |
| Clauses \* | TS-0004 v3.8.0 |
| Type of change: \* | [x]  Editorial change[ ]  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]  |
|  |

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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

This contribution is contingent on ARC-2018-0303R01 being agreed. There was a verbal agreement at ARC#37 that ACPs should be added to <schedule>

R01 adds change 2

### ------------------------------- Start of Change 1 -----------------------------------------------

* + 1. Resource Type <schedule>

7.4.9.1 Introduction

The <schedule> resource shall represent scheduling information in the context of its parent resource. If a <schedule> resource is not present as a child resource then there are no time-constraints on the context of its parent resource. An Originator shall have the same access control privileges to the <schedule> resource as it has to its parent resource.

The detailed <schedule> resource description can be found in clause 9.6.9 of the TS-0001 [6].

**Table 7.4.9.1‑1: Data type definition of <schedule> resource**

|  |  |  |
| --- | --- | --- |
| **Data Type ID** | **File Name** | **Note** |
| schedule | CDT-schedule-v3\_8\_0.xsd |  |

**Table 7.4.9.1‑2: Universal/Common Attributes of <schedule> resource**

|  |  |
| --- | --- |
| **Attribute Name** | **Request Optionality**  |
| **Create** | **Update** |
| *@resourceName* | O | NP |
| *resourceType* | NP | NP |
| *resourceID* | NP | NP |
| *parentID* | NP | NP |
| *creationTime* | NP | NP |
| *expirationTime* | O | O |
| *lastModifiedTime* | NP | NP |
| *labels* | O | O |
| *announceTo* | O | O |
| *announcedAttribute* | O | O |
| *accessControlPolicyIDs* | O | O |
| *dynamicAuthorizationConsultationIDs* | O | O |

**Table 7.4.9.1‑3: Resource Specific Attributes of <schedule> resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Attribute Name** | **Request Optionality**  | **Data Type** | **Default Value and Constraints** |
| **Create** | **Update** |
| *scheduleElement* | M | O | m2m:scheduleEntries | No Default and shall not be blank. |
| *networkCoordinated* | O | O | xs:boolean | This attribute is only applicable when <schedule> is a child resource of <node>. Default value is FALSE |

The *scheduleElement* attribute represents the list of scheduled execution times.

The each entry of the *scheduleElelement* attribute shall consist of a line with 7 field values (See Table 7.4.9.1-4).

The time to be matched with the schedule pattern shall be interpreted in UTC timezone.

**Table 7.4.9.1‑4: Definition of m2m:scheduleEntry string format**

|  |  |  |
| --- | --- | --- |
| **Field Name** | **Range of values** | **Note** |
| Second | 0 to 59 |  |
| Minute | 0 to 59 |  |
| Hour | 0 to 23 |  |
| Day of the month | 1 to 31 |  |
| Month of the year | 1 to 12 |  |
| Day of the week | 0 to 6 | 0 means Sunday |
| Year | 2000 to 9999 |  |

Each field value can be either an asterisk ('\*': matching all valid values), an element, or a list of elements separated by commas(',').

An element shall be either a number, a range (two numbers separated by a hyphen '-') or a range followed by a step value. A step value (a slash '/' followed by an interval number) specifies that values are repeated over and over with the interval between them. For example, note "0-23/2*"* in the Hour field is equivalent to "0,2,4,6,8,10,12,14,16,18,20,22*"*. A step value can also be used after an asterisk (e.g. "\*/2").

The task which shall be executed is depending on the parent resource of the <schedule> resource (see Table 7.4.9.1‑5).

**Table 7.4.9.1‑5: The task to be executed**

|  |  |  |
| --- | --- | --- |
| **Parent resource** | **Task to be executed** | **Note** |
| <remoteCSE> | Establish connection to the remoteCSE | Timing of disconnection is up to implementation in present release. |
| <subscription> | Flash spooled notifications |  |

EXAMPLE 1:

EXAMPLE: \* 0-5 2,6,10 \* \* \* \*

In case of parent resource was <remoteCSE>, the CSE will establish connection on 2:00-2:05, 6:00-6:05, and 10:00-10:05 every day.

End of EXAMPLE 1:

EXAMPLE 2:

EXAMPLE: \* \* 8-20 \* \* \* \*

In case of the parent resource was <subscription>, the notification for the subscribed event will be suspended between from 20:00 to 8:00 on weekend.

End of EXAMPLE 2:

EXAMPLE 3:

EXAMPLE: \* \* 0-23/2 \* \* \* \*

In case of parent resource was <remoteCSE>, the CSE will establish connection every two hours every day.

End of EXAMPLE 3:

EXAMPLE 4:

EXAMPLE: \* \* \* \* \* \*/2 \*

In case of parent resource was <remoteCSE>, the CSE will establish connection on Sunday, Tuesday, Thursday and Saturday (\*/2 in the day of the week field is equivalent to 0,2,4,6).

End of EXAMPLE 4:

**Table 7.4.9.1‑6: Child resources of <schedule > resource**

|  |  |  |  |
| --- | --- | --- | --- |
| **Child Resource Type**  | **Child Resource Name** | **Multiplicity** | **Ref. to in Resource Type Definition** |
| <subscription> | [variable] | 0..n | Clause 7.4.8 |
| <transaction> | [variable] | 0..n | Clause 7.4.61 |

7.4.9.2 <schedule> resource specific procedure on CRUD operations

7.4.9.2.0 Introduction

This sub-clause describes <schedule> resource specific behaviour for CRUD operations.

* + - * 1. Create

***Originator****:*

No change from the generic procedures in clause 7.2.2.1.

If <schedule> is created then scheduleElement (L) shall be created.

***Receiver****:*

No change from the generic procedures in clause 7.2.2.2.

* + - * 1. Retrieve

***Originator****:*

No change from the generic procedures in clause 7.2.2.1.

***Receiver****:*

No change from the generic procedures in clause 7.2.2.2.

* + - * 1. Update

***Originator****:*

No change from the generic procedures in clause 7.2.2.1.

***Receiver****:*

No change from the generic procedures in clause 7.2.2.2.

* + - * 1. Delete

***Originator****:*

No change from the generic procedures in clause 7.2.2.1.

If <schedule> is deleted then scheduleElement (L) shall be deleted.

***Receiver****:*

No change from the generic procedures in clause 7.2.2.2.

### ------------------------------- End of Change 1 -----------------------------------------------

### ------------------------------- Start of Change 2 -----------------------------------------------

1.

### regularResource

#### Description

This type definition includes the universal and common attributes used by the non-announceable M2M resources.

#### Reference

See Table 6.3.6‑2.

#### Usage

This type is used by the following resource types:

<delivery>, <eventConfig>, <execInstance>, <m2mServiceSubscriptionProfile>, <mgmtCommand>, <request>, <serviceSubscribedNode>, <statsCollect>, <statsConfig>, <subscription>, <serviceSubscribedAppRule>, <notificationTargetMgmtPolicyRef>, <notificationTargetPolicy>, <policyDeletionRules>, <dynamicAuthorizationConsultation>, <role>, <token>, <authorizationDecision>, <authorizationPolicy> <authorizationInformation>, <AEContactList>, <AEContactListPerCSE>, <localMulticastGroup>, <triggerRequest>, <crossResourceSubscription>, <backgroundDataTransfer>, <transactionMgmt>, <transaction>, <schedule>.

### announceableResource

#### Description

This type definition includes the universal and common attributes used by M2M resource types that are capable of being announced. In addition to the attributes of a regularResource, it includes (as optional) the common attributes that are used by the announcement mechanism.

#### Reference

See Table 6.3.6‑2.

#### Usage

This type is used by the following resource types:

<AE>, <container>, <group>, <locationPolicy>, <node>, <remoteCSE>, <semanticDescriptor>, <timeSeries>, <ontologyRepository>, <ontology>, <semanticMashupJobProfile>, <semanticMashupInstance>, <semanticMashupResult>, <multimediaSession>.

It is also used by the specializations of <mgmtObj>.

### announcedResource

####  Description

This type definition includes the universal and common attributes used by a resource that is announcing an announceable resource. In addition to the attributes of a regularResource, it includes (as optional) the link common attribute.

#### Reference

See Table 6.3.6‑2.

#### Usage

This type is used by the following resource types:

<AEAnnc>, <containerAnnc>, <groupAnnc>, <locationPolicyAnnc>, <nodeAnnc>, <remoteCSEAnnc>, <semanticDescriptorAnnc>, <[flexContainer]Annc>, <timeSeriesAnnc>, <ontologyRepositoryAnnc>, <ontologyAnnc>, <semanticMashupJobProfileAnnc>, <semanticMashupInstanceAnnc>, <semanticMashupResultAnne>, <multimediaSessionAnnc>.

It is also used by the xxxAnnc variants of the <mgmtObj> specializations.

### announceableSubordinateResource

#### Description

This type definition includes the common attributes used by resource types that are subordinate children of other resource types. It excludes attributes like ***accessControlPolicyIDs***, as this attribute is defined for such resources.

#### Reference

See Table 6.3.6‑2.

#### Usage

This type is used by the following resource types:

<accessControlPolicy>, <contentInstance>, <timeSeriesInstance>.

It is also used by the xxxAnnc variants of the <mgmtObj> specializations.

### ------------------------------- End of Change 2 -----------------------------------------------

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.?