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| CHANGE REQUEST | |
| Meeting ID:\* | RDM #52.2 |
| Source:\* | Andreas Kraft, DT, [A.Kraft@telekom.de](mailto:A.Kraft@telekom.de)  Cyrille Bareau, [cyrille.bareau@orange.com](mailto:cyrille.bareau@orange.com)  Andreas Neubacher, DT, [Andreas.Neubacher@magenta.at](mailto:Andreas.Neubacher@magenta.at) |
| Date:\* | 2022-01-04 |
| Reason for Change/s:\* | Move flexNode custom attribute to properties |
| CR against: Release\* | Release 4 |
| CR against: WI\* | Active WI-xxxx  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-0023, V4.8.0 |
| Clauses \* | 5.8.2 |
| 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) |  |
| 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

Version 4.8.0 of TS-0023 defines custom attributes for the [flexNode] DeviceClass in clause 5.8.2. Unfortunately, SDT doesn’t allow attributes in a DeviceClass, so these custom attributes cannot be specified or described with SDT.

This CR proposes to move these data points to Properties for the [flexNode} DeviceClass.

Lists are not allowed for Properties, this means that the properties are defined with an inner CSV format. This change is highlighted in Change 1 below.

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

### 5.8.2 flexNode

This flexContainer specialization is the root for SDT-based Device Management modules.

The containerDefinition attribute of this specialization shall be “org.onem2m.management.device.flexNode”.

It is targeted by the *flexNodeLink* attribute of *<flexContainer>* SDT devices (see in 6.2.2 the rules 1-6, 1-7 and 1-8).

Table 5.8.2‑1: Child resources of [*flexNode*] resource

| Child Resources of [*flexNode*] | Child Resource Type | Multiplicity | Description |
| --- | --- | --- | --- |
| *dmAreaNwkInfo\_<i>* | *[dmAreaNwkInfo]* | 0..n | See clause 5.8.10 |
| *dmAgent* | *[dmAgent]* | 0..1 | See clause 5.8.3 |
| *dmDeviceInfo* | *[dmDeviceInfo]* | 1 | See clause 5.8.4 |
| *dmDataModelIO\_<i>* | *[dmDataModelIO]* | 0..N | See clause 5.8.5 |
| *dmFirmware\_<i>* | *[dmFirmware]* | 1..N | See clause 5.8.6 |
| *dmSoftware\_<i>* | *[dmSoftware]* | 0..N | See clause 5.8.7 |
| *dmEventLog\_<i>* | *[dmEventLog]* | 0..N | See clause 5.8.8 |
| *dmPackage\_<i>* | *[dmPackage]* | 0..N | See clause 5.8.9 |
| *battery\_<i>* | *[battery]* | 0..N | See clause 5.3.10 |
| *dmCapability\_<i>* | *[dmCapability]* | 0..N | See clause 5.8.12 |
| *dmStorage\_<i>* | *[dmStorage]* | 0..N | See clause 5.8.13 |

NOTES:

* the notation ‘\_<i>’ for child resources indicates that the resource name is the name of the child ModuleClass or SubDevice flexContainer, appended with an underscore ‘\_’ and an incrementing index so that it is unique in the [flexNode] children (e.g. “dmFirmware\_0”, “dmFirmware\_1”, etc.). The index shall not have leading 0’s.
* the current list of modules for Device Management is not fixed and can evolve with new optional features.



Table 5.8.2-2: Properties of [flexNode] DeviceClass

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| --- | --- | --- | --- |
| Property Name | Property Type | Multiplicity | Description |
| *nodeID* | xs:string | 1 | The M2M-Node-ID of the node which is represented by this *<flexNode>* resource. |
| *hostedAELinks* | xs:string | 0..1 | This attribute allows to find the AEs that are represented by this [*flexNode*] resource, if any. The attribute shall contain a list of resource identifiers of *<AE>* resources representing the ADN-Aes that are represented by the current [*flexNode*] resource. Multiple resource identifiers are separated by commas (‘,’). |
| *hostedServiceLinks* | xs:string | 0..1 | This attribute allows to find SDT device <*flexContainer>* resources that havebeen created to represent services hosted on a device (ADN or NoDN proxied by an IPE), the device being represented by this [*flexNode*] resource.  If the device hosts a set of services represented by SDT device <*flexContainer>s,* then the attribute shall contain the list of resource identifiers of these <*flexContainer>* resources. Multiple resource identifiers are separated by commas (‘,’). |

If the <flexContainer>(s) that are listed in the *hostedServiceLinks* property have a *nodeLink* attribute that points to a <node>, then :

- if there are more than one such <flexContainer>, they shall all have the same *nodeLink* attribute value, and

- this [flexNode] resource shall have a *nodeLink* attribute with the same value, and shall have the same nodeID attribute as this <node> resource.

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