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| CHANGE REQUEST | |
| Meeting ID:\* | Joint RDM/SDS |
| Source:\* | Cyrille Bareau, Orange, [cyrille.bareau@orange.com](mailto:cyrille.bareau@orange.com)  Bob Flynn, Exacta, [bob.flynn@exactagss.com](mailto:bob.flynn@exactagss.com)  Andreas Kraft, Deutsche Telekom, [a.kraft@telekom.de](mailto:a.kraft@telekom.de)  Marianne Mohali, Orange, [marianne.mohali@orange.com](mailto:marianne.mohali@orange.com) |
| Date:\* | 2022-03-30 |
| Reason for Change/s:\* | See the introduction. |
| CR against: Release\* | Release 4 |
| CR against: WI\* | Active WI-0109  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 v4.9.0 |
| Clauses \* | 7.3.4, 7.4.18, 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 |
| Other TS/TR(s) impacted | 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 2020 (do not modify) | |

**oneM2M Notice**

The document to which this cover statement is attached is submitted to oneM2M. Participation in, or attendance at, any activity of oneM2M, constitutes acceptance of and agreement to be bound by terms of the Working Procedures and the Partnership Agreement, including the Intellectual Property Rights (IPR) Principles Governing oneM2M Work found in Annex 1 of the Partnership Agreement.

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.

If this is a correction, and the change applies to previous releases, a separate “mirror CR” should be posted at the same time as 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. Include any changes to references, definitions, and abbreviations in the same deliverable.

Follow the drafting rules.

All pictures must be editable.

Check spelling and grammar.

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 proposed new clause is 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 the 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 draft is part of a series of CRs related to the Work Item WI-0109: IPE-based Device Management with FlexContainers. For a full introduction, see clause 2 “Justification” in WI-0109-IPE-based\_Device\_Management\_with\_FlexContainers-V0\_0\_1.DOCX.

In this specific draft, the proposed changes are as follows:

1. Precise that the 7.3.4 clause is for “old”, CSE-based approach for DM.
2. Add the [flexNode] specialization as possible child for the <node> resource.
3. Add TS-0033 to the list of references.

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

### 7.3.4 Management common operations

#### 7.3.4.0 Introduction

This clause applies only in the case of CSE-based Device Management using an external technology specific protocols (e.g. BBF TR‑069, OMA-DM, and LWM2M), as defined in TS-0001 [6] clause 6.2.4.1.1. In the case of native oneM2M Device Management, there is no specific operations, and for IPE-based Device Management, as defined in TS-0001 [6] clause 6.2.4.1.2, the specific operations are defined in TS-0033 [57] clause 8.

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

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

### 7.4.18 Resource Type <node>

#### 7.4.18.1 Introduction

The <node> resource represents specific information that provides properties of an oneM2M Node that can be utilized by other oneM2M operations. The <node> resource has a <mgmtObj> and/or a [flexNode] <flexContainer> specialization as its child resources.

Table 7.4.18.1‑1: Data type definition of <node> resource

|  |  |  |
| --- | --- | --- |
| **Data Type ID** | **File Name** | **Note** |
| node | CDT-node.xsd |  |

Table 7.4.18.1‑2: Universal/Common Attributes of <node> resource

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

Table 7.4.18.1‑3: Resource Specific Attributes of <node> resource

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Attribute Name | Request Optionality | | Data Type | Default Value and Constraints |
| Create | Update |
| *nodeID* | M | O | m2m:nodeID |  |
| *hostedCSELink* | O | O | m2m:ID |  |
| *hostedAELinks* | O | O | m2m:listOfM2MID |  |
| *hostedServiceLinks* | O | O | m2m:listOfM2MID |  |
| *mgmtClientAddress* | O | O | xs:string |  |
| *roamingStatus* | NP | NP | xs:boolean | No default. true means that the Node is currently roaming.  When this attribute is not present, it indicates that no information is available. |
| *networkID* | NP | NP | xs:string | No default. When this attribute is not present, it indicates that no information is available. |
| *nodeType* | O | O | m2m:nodeType | Default is UNSPECIFIED. |

Table 7.4.18.1‑4: Child resources of <node> resource

|  |  |  |  |
| --- | --- | --- | --- |
| Child Resource Type | Child Resource Name | Multiplicity | Ref. to Resource Type Definition |
| <mgmtObj> | [variable] | 0..n | Clause 7.4.15  and Annex D |
| <flexContainer> | [flexNode] | 0..1 | Clause 5.8.2 in TS-0023 |
| <subscription> | [variable] | 0..n | Clause 7.4.8 |
| <semanticDescriptor> | [variable] | 0..n | Clause 7.4.34 |
| <transaction> | [variable] | 0..n | Clause 7.4.61 |
| <schedule> | [variable] | 0..n | Clause 7.4.9 |

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

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

## 2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non‑specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

The following referenced documents are necessary for the application of the present document.

[1] W3C Recommendation (26 November 2008): "Extensible Markup Language (XML) 1.0 (Fifth Edition)".

[2] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

[3] W3C Recommendation (2004): "XML Schema Part 2: Datatypes Second Edition".

[4] Void.

[5] Void.

[6] oneM2M TS-0001: "Functional Architecture".

[7] oneM2M TS-0003: "Security Solutions".

[8] IEEE 754-2008: "IEEE Standard for Floating-Point Arithmetic".

NOTE: Available at <http://ieeexplore.ieee.org/servlet/opac?punumber=4610933>.

[9] IETF RFC 4648: "The Base16, Base32, and Base64 Data Encodings".

[10] IETF RFC 2045: "Multipurpose Internet Mail Extensions (MIME) Part One: Format of Internet Message Bodies".

[11] IETF RFC 3987: "Internationalized Resource Identifiers (IRIs)".

[12] Void.

[13] Void.

[14] IETF RFC 6733: "Diameter Base Protocol".

[15] 3GPP TS 23.682: "Architecture enhancements to facilitate communications with packet data networks and applications".

[16] Void.

[17] 3GPP TS 23.003: "Numbering, addressing and identification".

[18] Void.

[19] IETF RFC 8259: "The JavaScript Object Notation (JSON) Data Interchange Format".

[20] IETF RFC 5234: "Augmented BNF for Syntax Specifications: ABNF".

[21] IETF RFC 3629: "UTF-8, a transformation format of ISO 10646".

[22] oneM2M TS-0008: "CoAP Protocol Binding".

[23] oneM2M TS-0009: "HTTP Protocol Binding".

[24] oneM2M TS-0010: "MQTT Protocol Binding".

[25] oneM2M TS-0011: "Common Terminology".

[26] IETF RFC 6838: "Media Type Specifications and Registration Procedures".

[27] ISO 8601:2004: "Data elements and interchange formats -- Information interchange -- Representation of dates and times".

[28] OMA-TS-REST\_NetAPI\_TerminalLocation: "Open Mobile Alliance; RESTful Network API for Terminal Location", Version 1.0.

[29] IETF RFC 4632: "Classless Inter-domain Routing (CIDR): The Internet Address Assignment and Aggregation Plan".

[30] IETF RFC 5952: "A Recommendation for IPv6 Address Text Representation".

[31] 3GPP TS 32.299: "Telecommunication management; Charging management; Diameter charging applications".

[32] IETF RFC 4006: "Diameter Credit-Control Application".

[33] W3C Recommendation: "SPARQL 1.1 Query Language".

[34] W3C Recommendation: "RDF 1.1 XML Syntax".

[35] IETF RFC 4122: "A Universally Unique IDentifier (UUID) URN Namespace".

[36] oneM2M TS-0012: "oneM2M Base Ontology".

[37] oneM2M TS-0021: "oneM2M and AllJoyn Interworking".

[38] oneM2M TS-0022: "Field Device Configuration".

[39] IETF RFC 7049 (October 2013): "Concise Binary Object Representation (CBOR)".

[40] oneM2M TS-0023: "Home Appliances Information Model and Mapping".

[41] ISO 3166-1:2013: "Codes for the representation of names of countries and their subdivisions -- Part 1: Country codes".

[42] oneM2M TS-0020: "WebSocket Protocol Binding".

[43] oneM2M TS-0026: "3GPP Interworking".

[44] W3C Recommendation: "OWL 2 Web Ontology Language: Structural Specification and Functional-Style Syntax (Second Edition)".

[45] W3C Recommendation: "OWL 2 Web Ontology Language XML Serialization (Second Edition)".

[46] W3C Recommendation: "OWL 2 Web Ontology Language: Mapping to RDF Graphs (Second Edition)".

[47] W3C Recommendation: "RDF 1.1 Turtle: Terse RDF Triple Language".

[48] W3C Note: "OWL 2 Web Ontology Language Manchester Syntax (Second Edition)".

[49] W3C Recommendation: "JSON-LD 1.1: A JSON-based Serialization for Linked Data".

[50] oneM2M TS-0034: "Semantics Support".

[51] 3GPP TS 29.122: "T8 reference point for Northbound Application Programming Interfaces (APIs)".

[52] IETF RFC 4566: "SDP: Session Description Protocol".

[53] IETF RFC 7946: "The GeoJSON Format".

[54] W3C Recommendation: "RIF Core Dialect (Second Edition)".

[55] IETF RFC 8141: " Uniform Resource Names (URNs)”.

[56] oneM2M URN Namespace definition <https://wiki.onem2m.org/index.php?title=OneM2M_URN_Namespace>

[57] oneM2M TS-0033: "Interworking Framework".

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