**3GPP TSG-CT WG1 Meeting #133e-bisC1-22abcd**

**E-meeting, 17-21 Jauary 2022 (was C1-220293)**

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| --- |
| *CR-Form-v12.1* |
| **CHANGE REQUEST** |
|  |
|  | **24.546** | **CR** | **0015** | **rev** | **1** | **Current version:** | **17.1.0** |  |
|  |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network |  | Core Network | **x** |

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|  |
| ***Title:***  | Data types applicable to multiple resource representations |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | C1 |
|  |  |
| ***Work item code:*** | eSEAL |  | ***Date:*** | 2022-01-10 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)...Rel-15 (Release 15)Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* |
|  |  |
| ***Reason for change:*** | Data types used for CoAP need to be defined and is proposed to be added in the CoAP annex of 24.546. |
|  |  |
| ***Summary of change:*** | Definitions of data types used for CoAP are added |
|  |  |
| ***Consequences if not approved:*** | The specification for CoAP in SEAL specifications remain incomplete |
|  |  |
| ***Clauses affected:*** | 2, C.1.x (new) |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

\* \* \* First Change \* \* \* \*

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.434: "Service Enabler Architecture Layer for Verticals (SEAL); Functional architecture and information flows;".

[3] IETF RFC 4825: "The Extensible Markup Language (XML) Configuration Access Protocol (XCAP)".

[4] OMA OMA-TS-XDM\_Core-V2\_1-20120403-A: "XML Document Management (XDM) Specification".

[5] 3GPP TS 24.547: "Identity management - Service Enabler Architecture Layer for Verticals (SEAL); Protocol specification;".

[6] IETF RFC 6750: "The OAuth 2.0 Authorization Framework: Bearer Token Usage".

[7] IETF RFC 7159: "The JavaScript Object Notation (JSON) Data Interchange Format".

[8] 3GPP TS 24.229: "IP multimedia call control protocol based on Session Initiation Protocol (SIP) and Session Description Protocol (SDP); Stage 3".

[9] IETF RFC 5875: "An Extensible Markup Language (XML) Configuration Access Protocol (XCAP) Diff Event Package".

[10] IETF RFC 6050 (November 2010): "A Session Initiation Protocol (SIP) Extension for the Identification of Services".

[11] IETF RFC 6665 (July 2012): "SIP-Specific Event Notification".

[12] IETF RFC 7252: "The Constrained Application Protocol (CoAP)".

[13] IETF RFC 7959: "Block-Wise Transfers in the Constrained Application Protocol (CoAP) ".

[14] IETF RFC 7641: "Observing Resources in the Constrained Application Protocol (CoAP)".

[15] IETF RFC 8323: "CoAP (Constrained Application Protocol) over TCP, TLS, and WebSockets".

[16] IETF RFC 8516: ""Too Many Requests" Response Code for the Constrained Application Protocol".

[17] IETF RFC 8949: “Concise Binary Object Representation (CBOR)”.

[18] IETF RFC 8610: "Concise Data Definition Language (CDDL): A Notational Convention to Express Concise Binary Object Representation (CBOR) and JSON Data Structures".

[19] Constrained RESTful Environments (CoRE) Parameters at IANA, <https://www.iana.org/assignments/core-parameters/core-parameters.xhtml>

[20] Internet draft draft-ietf-core-problem-details-01: "Problem Details For CoAP APIs".

[21] Internet draft draft-ietf-core-new-block-14: "Constrained Application Protocol (CoAP) Block-

[rfc3986] IETF RFC 3986: "Uniform Resource Identifier (URI): Generic Syntax".

[29501] 3GPP TS 29.501: "Principles and Guidelines for Services Definition".

\* \* \* Next Change \* \* \* \*

## C.1.X Data types applicable to multiple resource representations

### C.1.X.1 General

This clause defines structured data types, simple data types, and enumerations that are applicable to several APIs defined for CoAP resource representations in the present specification and other SEAL specifications and can be referenced from data structures defined in the subsequent clauses and from CoAP resource representations in other SEAL specifications.

NOTE: As a convention, data type names in the present specification follows UpperCamel and parameters follows lowerCamel as specified in clause 5.1.1 of 3GPP TS 29.501 [r29501].

### C.1.X.2 Referenced structured data types

Table C.1.X.2-1 lists structured data types referenced by multiple CoAP resource representations.

Table C.1.X.2-1: Referenced Structured Data Types

|  |  |  |
| --- | --- | --- |
| Data type | Reference | Description |
| ValTargetUe | Clause C.2.1.4.2.4 | Information identifying a VAL user ID or VAL UE ID. |

### C.1.X.3 Referenced simple data types and enumerations

The simple datatypes based on the CBOR types are defined in table C.1.X.3-1 and the simple data types defined in table 5.2.1.3.2-2 apply to multiple SEAL-UU APIs.

Table C.1.X.3-1: CBOR-based data types

|  |  |
| --- | --- |
| Type name | Description |
| bytes | Is a "byte string" as defined in IETF RFC 8949 [17]. |
| boolean | Is a type which has 2 values “false” and “true” with the values as defined in IETF RFC 8949 [17]. |
| integer | As defined in IETF RFC 8949 [17]. |
| number | Is any number as defined in IETF RFC 8949 [17]. Precision format (half-precision, single-precision, and double-precision) can be indicated. |
| string | Is a "text string" as defined in IETF RFC 8949 [17]. |

Table C.1.X.3-2: Simple data types applicable to multiple CoAP resource representations

|  |  |
| --- | --- |
| Type name | Description |
| Uri | String providing an URI formatted according to IETF RFC 3986 [rfc3986].  |

Table C.1.X.3-3 lists simple data types and enumerations referenced by multiple CoAP resource representations.

Table C.1.X.3-3: Referenced simple data types and enumerations applicable to multiple CoAP resource representations

|  |  |  |
| --- | --- | --- |
| Type name | Reference | Description |
| ConfigType | C.2.1.4.3.1 | Represents the type of configuration. |

\* \* \* End of Changes \* \* \* \*