**3GPP TSG-CT WG4 Meeting #99eC4-204xxx**

**E-Meeting, 18th – 28th August 2020 *Revision of C4-204145***

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| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **29.501** | **CR** | **0088** | **rev** | **1** | **Current version:** | **16.4.0** |  |
|  |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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|  |
| ***Title:***  | Data types with string type |
|  |  |
| ***Source to WG:*** | Huawei |
| ***Source to TSG:*** | CT4 |
|  |  |
| ***Work item code:*** | SBIProtoc16 |  | ***Date:*** | 2020-08-24 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-16 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | For data types with string type, it is not clear whether characters with lowercase or uppercase are different or not.Some IEs like APN/DNN/FQDN, it is defined in TS 23.003 that the case of alphabetic characters is not significant. But for most of the string type IEs, which are not define in TS 23.003, it shall be further clarified, otherwise it may cause the inter-operation issue in multi-vendors scenario. |
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| ***Summary of change:*** | For string typle IEs, the case of alphabetic characters is not significant. |
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| ***Consequences if not approved:*** | Inter-operation issue in multi-vendors scenario. |
|  |  |
| ***Clauses affected:*** | 2, 5.2.4.1 |
|  |  |
|  | **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 29.500: "5G System; Technical Realization of Service Based Architecture; Stage 3".

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

[4] OpenAPI: "OpenAPI 3.0.0 Specification", <https://github.com/OAI/OpenAPI-Specification/blob/master/versions/3.0.0.md>.

[5] 3GPP TS 29.571: "5G System; Common Data Types for Service Based Interfaces Stage 3".

[6] IETF RFC 7231: "Hypertext Transfer Protocol (HTTP/1.1): Semantics and Content"

[7] IETF RFC 7396: "JSON Merge Patch".

[8] IETF RFC 6902: "JavaScript Object Notation (JSON) Patch".

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

[10] IETF RFC 5789: "PATCH Method for HTTP"

[11] IETF RFC 8288: "Web Linking".

[12] IANA: "HTTP Status Code Registry at IANA", <http://www.iana.org/assignments/http-status-codes>

[13] IETF RFC 7540: "Hypertext Transfer Protocol Version 2 (HTTP/2)"

[14] Fielding, Roy Thomas. Architectural Styles and the Design of Network-based Software Architectures. Doctoral dissertation, University of California, Irvine, 2000.

[15] Erik Wilde, Cesare Pautasso, REST: From Research to Practice, Springer

[16] YAML 1.2: "YAML Ain't Markup Language", <http://yaml.org>.

[17] Semantic Versioning Specification: <https://semver.org>

[18] 3GPP TS 29.510: "5G System; Network Function Repository Services; Stage 3".

[19] IETF RFC 7807: "Problem Details for HTTP APIs".

[20] 3GPP TS 29.502: "5G System; Session Management Services; Stage 3".

[21] 3GPP TS 29.509: "Authentication Server Services; Stage 3".

[22] 3GPP TS 33.501: "Security architecture and procedures for 5G system".

[23] IETF RFC 6749: "The OAuth 2.0 Authorization Framework".

[24] 3GPP TS 29.573: "5G System; Public Land Mobile Network (PLMN) Interconnection;Stage 3".

[25] 3GPP TR 21.900: "Technical Specification Group working methods".

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

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

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

#### 5.2.4.1 General

The application data model supported by the API shall be specified with the following data types:

1. Structured data types

2. Simple data types

3. Enumerations

4. Binary data

5. Data types describing alternative data types

6. Data types describing combinations of data types

Each data type can be specific for the API or common to multiple APIs (offered by the same or different NFs). The common data types shall be specified in 3GPP TS 29.571 [5]. Characters in an enumeration or string data type in both simple and structured/combination data types specific for the API or common to multiple APIs shall be handled as case sensitive by default, unless explicitly specified the IE is case insensitive in specifications, e.g. DNN in 3GPP TS 23.003 [x].

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