**3GPP TSG-CT WG1 Meeting #124-eC1-203412**

**Electronic meeting, 2-10 June 2020**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **24.526** | **CR** | **0078** | **rev** | **-** | **Current version:** | **15.3.0** |  |
|  | | | | | | | | |
| *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 |  |

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|  | | | | | | | | | | |
| ***Title:*** | Specify UE behavior when pre-configured policy is syntactically incorrect | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | BlackBerry UK Ltd., NTAC (?), Ministère Economie et Finances (?), The Police of the Netherlands (?), BT (?) | | | | | | | | | |
| ***Source to TSG:*** | C1 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5GS\_Ph1-CT | | | | |  | ***Date:*** | | | 2020-05-15 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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 can be 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:*** | | While the TS specifies syntactic rules for policies (e.g. in 5.3.3.2), the TS does not specify how to treat syntactically incorrect policies. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | TS 24.007 defines conditions that, if met, render IEs in messages syntactically incorrect. It is proposed to reuse these conditions in TS 24.526 and specify the value part is to be ignored it is syntactically incorrect.  NIT: “Any PLMN” is documented as “Any\_PLMN” in TS 24.502. Add “\_”.  **These changes are backwards compatible** | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Unclear how to handle syntactically incorrect policies. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 5.3.3.2 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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 23.503: " Policy and Charging Control Framework for the 5G System; Stage 2".

[3] 3GPP TS 24.502: "Access to the 3GPP 5G Core Network (5GCN) via Non-3GPP Access Networks (N3AN); Stage 3".

[4] 3GPP TS 23.003: "Numbering, addressing and identification".

[5] 3GPP TS 25.331: "Radio Resource Control (RRC); Protocol Specification".

[6] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA) Radio Resource Control (RRC); Protocol specification".

[7] 3GPP TS 23.032: "Universal Geographical Area Description (GAD)".

[8] IEEE Std 802.11™-2012: "Information Technology- Telecommunications and information exchange between systems-Local and metropolitan area networks-Specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications".

[9] Wi-Fi Alliance: "Hotspot 2.0 (Release 2) Technical Specification, version 1.0.0", 2014-08-08.

[10] ITU-T Recommendation E.212: "The international identification plan for public networks and subscriptions", 2016-09-23.

[11] 3GPP TS 24.501: "Non-Access-Stratum (NAS) protocol for 5G System (5GS); Stage 3".

[12] IETF RFC 1035: "Domain names - implementation and specification".

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

[14] 3GPP TS 38.413: "NG-RAN; NG Application Protocol (NGAP)".

[15] 3GPP TS 23.501: "System Architecture for the 5G System; Stage 2".

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

[17] Void.

[18] Void.

[19] 3GPP TS 24.007: "Mobile radio interface signalling layer 3; General aspects".

\*\*\* Next change \*\*\*

## 4.1 Overview

The UE policies for 5GS include:

- UE route selection policy (URSP) (see subclause 4.2); and

- Access network discovery and selection policy (ANDSP) (see subclause 4.3).

The UE policies can be delivered from the PCF to the UE. The UE policy delivery procedure is specified in 3GPP TS 24.501 [11].

The UE policies can also be pre-configured in the UE. The pre-configured policy shall be applied by the UE only when the UE has not received the same type of policy from the PCF. The implementation of pre-configured UE policies is out of scope of this specification.

The UE policies are value parts (see 3GPP TS 24.007 [19]). When a (pre-configured) value part of a type of policy violates syntactic rules given in the specification of the value part, the value part shall be ignored.

\*\*\* Next change \*\*\*

#### 5.3.3.2 N3AN node selection information

The content of N3AN node selection information contains a sequence of the N3AN node selection information entries. Each N3AN node selection information entry contains a PLMN ID and information for the PLMN ID. The content of N3AN node selection information contain at least an N3AN node selection information entry with information for the HPLMN and an N3AN node selection information entry for any PLMN.

The content is encoded according to figure 5.3.3.2.1, figure 5.3.3.2.2 and table 5.3.3.2.1.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |  |
| N3AN node selection information entry 1 | | | | | | | | octet x+5 |
| octet y |
| N3AN node selection information entry 2 | | | | | | | | octet y+1  octet t |
| … | | | | | | | |  |
| N3AN node selection information entry n | | | | | | | | octet u  octet v |

Figure 5.3.3.2.1: Content of N3AN node selection information

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 8 | 7 | 6 | | 5 | | 4 | 3 | 2 | 1 |  |
| Length of N3AN node selection information entry | | | | | | | | | | octet x+5 |
| MCC digit 2 | | | | | | MCC digit 1 | | | | octet x+6 |
| MNC digit 3 | | | | | | MCC digit 3 | | | | octet x+7 |
| MNC digit 2 | | | | | | MNC digit 1 | | | | octet x+8 |
| FQDN format | | | Preference | | Priority | | | | | octet x+9 |

Figure 5.3.3.2.2: N3AN node selection information entry

Table 5.3.3.2.1: N3AN node selection information

|  |  |  |
| --- | --- | --- |
| Length of N3AN node selection information entry (octet x+5) contains length of subsequent fields in the N3AN node selection information entry. | | |
| PLMN ID (octet x+6 to x+7) field shall be set to zero if it indicates "any\_PLMN". Otherwise, | | |
|  | | |
| MCC, Mobile country code (octet x+6, and bits 5 to 1 of octet x+7) | | |
| The MCC field is encoded as in ITU-T Recommendation E.212 [10], annex A. | | |
|  | | |
| MNC, Mobile network code (bits 8 to 5 of octet x+7, and octet x+8) | | |
| The encoding of this field is the responsibility of each administration but BCD coding shall be used. The MNC shall consist of 2 or 3 digits. If a network operator decides to use only two digits in the MNC, MNC digit 3 shall be encoded as "1111". | | |
|  | | |
| Priority (bits 5 to 1 of octet x+9) indicates the preference order given to N3AN nodes of a PLMN. The lower value indicates higher priority. If the PLMN is the UE's HPLMN or the PLMN ID indicates "any\_PLMN", this priority filed shall be ignored. | | |
|  | | |
| Preference (bit 6 of octet x+9) indicates which N3AN node type is preferred in this PLMN and is encoded as follows. | | |
| **6** |  | |
| 0 | N3IWF is preferred | |
| 1 | ePDG is preferred | |
|  | | |
| FQDN format (bits 8 to 7 of octet x+9) indicates format to be used when the FQDN is constructed by the UE. This field is encoded as follows. | | |
| **8** | **7** |  |
| 0 | 0 | Operator identifier based ePDG FQDN format or operator identifier based N3IWF FQDN. |
|  |  |  |
| 0 | 1 | Tracking/location area identity based ePDG FQDN format or tracking area identity based N3IWF FQDN format. |
| All other values are reserved. | | |
|  | | |

\*\*\* No more changes \*\*\*