**3GPP TSG- Meeting # *3376***

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| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  |  | **CR** |  | **rev** | **1** | **Current version:** |  |  |
|  | | | | | | | | |
| *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 | **X** | Core Network | **X** |

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| ***Title:*** |  | | | | | | | | | |
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| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S5 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *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-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | 3GPP SA5 YANG design regulalry use the pyang YANG validator tool. This tool has multiple options including --strict, --lint and --3gpp.  A pyang plugin (activated by the --3gpp option) was implemented to check YANG modules according to 3GPP rules documented in TS 32.160 clause 6.2. This should be prescribed for checking 3GPP modules.  Earlier the pyang option --lint was used. Checks ordered by the --lint option follow IETF guidelines, that are not the same as 3GPP guidelines. The 3GPP plugin follows the 3GPP guidelines.  Automatic checks in Forge have been using the --3gpp option (instead of lint) for some time now, however the relevant section of 32.160 was not updated. | | | | | | | | |
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| ***Summary of change:*** | | Prescribe that the pyang option --3gpp shall be used not the --lint option.  Add missing pyang reference. | | | | | | | | |
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| ***Consequences if not approved:*** | | YANG rules already documented in clause 6.2 will not be checked. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, 6.2.1.9 | | | | | | | | |
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|  | | **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 28.533: "Management and orchestration; Architecture framework".

[3] 3GPP TS 32.156: "Telecommunication management; Fixed Mobile Convergence (FMC) Model Repertoire"

[4] ITU-T Recommendation M.3020 (07/2017): "Management interface specification methodology".

[5] 3GPP TR 21.801: "Specification drafting rules".

[6] 3GPP TS 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)".

[7] 3GPP TS 28.541: "Management and orchestration; 5G Network Resource Model (NRM); Stage 2 and stage 3".

[8] 3GPP TS 32.302: "Telecommunication management; Configuration Management (CM); Notification Integration Reference Point (IRP); Information Service (IS)".

[9] 3GPP TS 32.300: "Telecommunication management; Configuration Management (CM); Name convention for Managed Objects".

[10] ITU-T Recommendation M.3020 (07/2011): "Management interface specification methodology" – Annex E "Information type definitions – type repertoire".

[11] IETF RFC 8407: "Guidelines for Authors and Reviewers of Documents Containing YANG Data Models, October 2018".

[12] 3GPP TS 28.532: " Management and orchestration; Generic management services"

[13] IETF RFC 8528: "YANG Schema mount "

[14] OpenAPI: "OpenAPI 3.0.0 Specification", <https://github.com/OAI/OpenAPI-Specification/blob/master/versions/3.0.1.md>.

[15] draft-wright-json-schema-01 (October 2017): "JSON Schema: A Media Type for Describing JSON Documents".

[16] draft-wright-json-schema-validation-01 (October 2017: "JSON Schema Validation: A Vocabulary for Structural Validation of JSON".

[17] draft-wright-json-schema-hyperschema-01 (October 2017): "JSON Hyper-Schema: A Vocabulary for Hypermedia Annotation of JSON.

[18] IETF RFC 7950: "The YANG 1.1 Data Modeling Language, August 2016".

[19] [IETF RFC 8525](https://www.rfc-editor.org/rfc/rfc8525): " YANG Library".

[20] 3GPP TS 28.623: “Generic Network Resource Model (NRM) Integration Reference Point (IRP); Solution Set (SS) definitions”

[x] [PYANG an extensible YANG validator and converter](https://github.com/mbj4668/pyang)

***Next change***

#### 6.2.1.9 Model correctness, checking

3GPP YANG modules shall be checked with the pyang tool. See: pyang [x].

The "pyang –-strict" command shall be run with no errors returned.

"pyang --3gpp" should also be run against all 3GPP YANG modules. Errors and warning produced by the "pyang --3gpp" checks should be removed. However, as these errors/warnings do not affect the correctness or functionality of the YANG module, and in some cases the changes needed to remove them would actually degrade readability, it is not a mandatory to remove the errors/warnings produced by the "pyang --3gpp".

***End of changes***