3GPP WG-SA2 Meeting #153E S2-220xxxx

E-meeting, 10-14 October 2022 (revision of S2-220xxxx)

**Source: China Mobile, vivo**

**Title: New WID on Enablers for Network Automation for 5G - phase 3**

**Document for: Approval**

**Agenda Item: 10.3**

3GPP™ Work Item Description

Information on Work Items can be found at <http://www.3gpp.org/Work-Items>
See also the [3GPP Working Procedures](http://www.3gpp.org/specifications-groups/working-procedures), article 39 and the TSG Working Methods in [3GPP TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm)

**Title:** Enablers for Network Automation for 5G – phase 3

**Acronym:** eNA\_Ph3

**Unique identifier:** TBD

**Potential target Release:** Rel-18

# 1 Impacts

{For Normative work, identify the anticipated impacts. For a Study, identify the scope of the study}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Affects: | UICC apps | ME | AN | CN | Others (specify) |
| Yes |  | X |  | X |  |
| No |  |  | X |  |  |
| Don’t know | X |  |  |  | X |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
| X | Feature |
|  | Building Block |
|  | *Work Task* |
|  | Study Item |

## 2.2 Parent Work Item

For a brand-new topic, use “N/A” in the table below. Otherwise indicate the parent Work Item.

|  |
| --- |
| Parent Work / Study Items  |
| Acronym | Working Group | Unique ID | Title (as in 3GPP Work Plan) |
| FS\_eNA\_Ph3 | SA2 | 940073 | Study on Enablers for Network Automation for 5G - phase 3 |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work Items (if any) |
| Unique ID | Title | Nature of relationship |
| 840022 | Study on Enablers for Network Automation for 5G - phase 2 | Antecedent study item (TR 23.700-91) |
| 900031 | Enablers for Network Automation for 5G - phase 2 | Antecedent Work item (TS 23.288) |
| 760047 | Study of enablers for Network Automation for 5G | Antecedent study item (TR 23.791) |
| 830047 | Enablers for Network Automation for 5G | Antecedent Work item (TS 23.288) |
| 830034 | Study on UPF enhancement for control and SBA | Related to how UPF report data to NWDAF |

# 3 Justification

In Rel-15 ,Rel-16, and also Rel-17 the framework and solutions of eNA had been investigated for supporting network automation leveraging 5GC information exposure and network data analytics. The study in Rel-18 have further discussion on architecture enhancement, new cases and Rel-17 leftover.

The intent of this work item in Rel-18 is to complete the normative work based on the conclusions of the study in Rel-18 on further architecture enhancement, new cases and even Rel-17 leftover.

# 4 Objective

This work item aims at further enhancements for NWDAF, based on what has been specified in the previous releases to allow 5GS to support network automation. This work item focuses on architecture enhancement, new scenarios and the necessary inputs and outputs to the NWDAF based on the conclusions of the study in Rel-18, as described in clause 8 of TR 23.700-81, which leads to the normative work focusing on 11 key aspects as follows:

* Improve correctness of NWDAF analytics
* NWDAF-assisted application detection
* Data and analytics exchange in roaming case
* Enhancements on Data collection and Storage
* Enhancements on trained ML Model sharing
* NWDAF-assisted URSP
* Enhancements on QoS Sustainability analytics
* Supporting Federated Learning in 5GC
* Enhancement of NWDAF with finer granularity of location information
* Interactions with MDAS/MDAF
* To capture enhancements of NWDAF which have been studied and concluded in other R18 SIDs such as FS\_AIMLsys, FS\_eLCS, FS\_UPEAS.

NOTE: The conclusion of other R18 SIDs on NWDAF enhanments are needed.

# 5 Expected Output and Time scale

|  |
| --- |
| New specifications {One line per specification. Create/delete lines as needed} |
| Type  | TS/TR number | Title | For info at TSG#  | For approval at TSG# | Rapporteur |
|  |  |  |  |  |  |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| 23.501 | Architectural and Conceptual enhancements to support the stated objectives | TSG#99(March 2023) | impacts tbc according to conclusions |
| 23.502 | Procedural enhancements to support the stated objectives | TSG#99(March 2023) | impacts tbc according to conclusions |
| 23.503 | Policy enhancements to support the stated objectives | TSG#99(March 2023) | impacts tbc according to conclusions |
| 23.288 | Architecture enhancements and use cases for 5G System (5GS) to support network data analytics services | TSG#99(March 2023) | impacts tbc according to conclusions |

# 6 Work item Rapporteur(s)

Aihua Li, China Mobile, liaihua@chinamobile.com, Primary Rapporteur

Xiaobo Wu, vivo, xiaobo.wu@vivo.com, Secondary Rapporteur

# 7 Work item leadership

SA2

# 8 Aspects that involve other WGs

Coordination with SA3, SA4 and SA5 is expected during the work.

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile  |
| vivo |
| China Telecom(?) |
| Huawei(?) |
| China Unicom(?) |
| China Southern Power Grid Co., Ltd(?) |
| AT&T(?) |
| CATT(?) |
| Telecom Italia(?) |
| KDDI(?) |
| CAICT(?) |
| NEC(?) |
| Alibaba(?) |
| Lenovo(?) |
| ZTE(?) |
| Verizon UK Ltd(?) |
| Intel(?) |
| Deutsche Telekom(?) |
| Convida Wireless(?) |
| Motorola Mobility(?) |
| Ericsson(?) |
| Orange(?) |
| Sprint(?) |
| NTT DoCoMo(?) |
| ETRI(?) |
| Tencent(?) |
| Cisco Systems(?) |
| OPPO(?) |
| Nokia(?) |
| Nokia Shanghai Bell(?) |
| LG Electronics(?) |
| Samsung(?) |
| T-Mobile USA(?) |
| Sandvine(?) |
| KT(?) |
| InterDigital(?) |
| Qualcomm(?) |
| KPN(?) |
| Matrixx(?) |
| Telefonica(?) |
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