**3GPP TSG-SA5 Meeting #162 *S5-253429rev1***

**Goteborg, Sweden, 25 - 29 August 2025**

**Source:** **Moderator (China Mobile), NTT DOCOMO, Rakuten Mobile,...**

**Title: New WID on cloud aspects of management and orchestration**

**Document for: Approval**

**Agenda Item: 5.5**

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: Cloud aspects of management and orchestration

Acronym: Cloud\_OAM

Unique identifier:

Potential target Release: Rel-20

# 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 | X |  |  |  |
| Don't know |  |  |  |  | X |

# 2 Classification of the Work Item and linked work items

## 2.1 Primary classification

### This work item is a …

|  |  |
| --- | --- |
|  | Study  |
| x | Normative – Stage 1 |
| x | Normative – Stage 2 |
|  | Normative – Stage 3 |
|  | Normative – Other\* |

## 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\_Cloud\_OAM | SA5 | 1020010 |  Study on Cloud Aspects of Management and Orchestration |

### 2.3 Other related Work Items and dependencies

|  |
| --- |
| Other related Work /Study Items (if any) |
| Unique ID | Title | Nature of relationship |
|  |  |  |

# 3 Justification

TR 28.869 studies cloud aspects of management and orchestration, specifically, the use of VNF generic OAM functions defined by ETSI NFV, the use of industry solutions including ETSI NFV’s NFV-MANO, and other solutions for management of cloud native network functions, and the support of different cloud deployment scenarios.

The following key issues were analyzed and related solutions were provided in the TR phase:

- Use of VNF generic OAM functions supporting cloud-native VNFs/NF Deployment instances management:

The use cases of configuration, upgrade, traffic, and policy management of cloud-native VNFs were studied, and the corresponding solutions were described, which mainly introduce platform entities that interact with the 3GPP management system.

- Use of industry solutions for management of cloud-native VNF/NF Deployment instances:

 Use cases for LCM of NF Deployment instances (i.e., creation, modification, termination and scaling of NF Deployment instances) were studied. Use cases related to data streaming have been also analyzed. The corresponding solutions acknowledge that the 3GPP management architecture is flexible to support the use of NFV-MANO but not limited to it, for the management of NF Deployment instances.

- The Observability for Cloud Native Network functions were studied.

Based on the conclusions and recommendations of TR 28.869, it is suggested that standardization work be carried out in the 5G-A stage.it is necessary for SA5 to carry out normative work for cloud aspects of management and orchestration.

 (Editor's Note: The above content maybe updated based on the discussion at the SA5 meeting)

# 4 Objective

The objectives include the following aspects for the 3GPP management system to support cloud native:

**WT-1**: Specify the concept and terminology of “NF deployment”, and clarify the relationship between “NF Deployment” and “VNF” as currently used in 3GPP specifications.

**WT-2**: Specify the use cases, requirements and high-level solution/procedures using non ETSI NFV MANO for LCM of NF Deployment, and potential updates to existing ones using ETSI NFV MANO.

**WT-3**: Specify eenhancements for LCM of NF Deployment instance using the deployment management reference point based on declarative descriptor options.

**WT-4**: Specify eenhancements related to OAM for NF deployments.

NOTE: The above WTs shall be updated based on the TR 28.869 conclusions.

## TU estimates and dependencies

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Work Task ID** | **TU Estimate****(Study)** | **TU Estimate****(Normative)** | **RAN Dependency****(Yes/No/Maybe)**  | **SA Dependency****(Yes/No/Maybe)** |
| WT-1 | 0 | 0.5 | **No** | **No** |
| WT-2 | 0 | 1 | **No** | **No** |
| WT-3 | 0 | 1 | **No** | **No** |
| WT-4 | 0 | 1 | **No** | **No** |

# 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 |
|  |  |  | SA#110 | SA#111 |  |

|  |
| --- |
| Impacted existing TS/TR {One line per specification. Create/delete lines as needed} |
| TS/TR No. | Description of change  | Target completion plenary# | Remarks |
| TS 28.531 | may update existing use cases, requirements and procedures using ETSI NFV MANO | SA#114 |  |
| TS 28.533 | may update clause 5.2 management interactions with NFV MANO and related Annexs | SA#114 |  |
|  |  |  |  |

# 6 Work item Rapporteur(s)

# 7 Work item leadership

SA5

# 8 Aspects that involve other WGs

ETSI NFV

# 9 Supporting Individual Members

|  |
| --- |
| Supporting IM name |
| China Mobile |
| Rakuten Mobile |
| DOCOMO? |
| AT&T? |
| Orange |
| CATT |
| AsiaInfo |
| ZTE |
| Huaiwei? |
| Ericsson? |
| Nokia? |
| FiberCop? |
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