**3GPP TSG-SA5 Meeting #155 *S5-242878***

Jeju, South Korea, 27 - 31 May 2024

**Source: Nokia**

**Title: Rel-19 pCR TR 28.879 Add use case for logging the management service API invocations**

**Document for: Approval**

**Agenda Item: 6.19.21**

# 1 Decision/action requested

***In this box give a very clear / short /concise statement of what is wanted.***

# 2 References

[1] 3GPP TR 28.879, " Study on OAM for service management and exposure to external consumers".

# 3 Rationale

When exposing management services for consumption by external MnS consumers, it is important to log the service API invocations to the CCF. Accordingly, this pCR proposes adding a new use case, i.e., logging the management service API invocations to the CCF to clause 5.1 of TR 28.879 [1].

# 4 Detailed proposal

It is proposed that the following changes be made to clause 5.1 of TR 28.879 [1].

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| **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 28.622: "Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS)"

[4] 3GPP TS 28.537: "Management and orchestration; Management capabilities".

[5] 3GPP TS 23.222: "Functional architecture and information flows to support Common API Framework for 3GPP Northbound APIs; Stage 2"

[6] SP-231669: "LS on collaboration and alignment of 3GPP defined application enablers with GSMA Open Gateway".

[7] 3GPP [TS 23.434](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3587): "Service Enabler Architecture Layer for Verticals (SEAL); Functional architecture and information flows".

[8] 3GPP [TS 23.255](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3843): "Application layer support for Vehicle-to-Everything (V2X) services; Functional architecture and information flows".

[9] 3GPP [TS 23.286](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3562): "Application layer support for Uncrewed Aerial Systems (UAS) services; Functional architecture and information flows".

[10] 3GPP [TS 23.545](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3948): "Application layer support for Factories of the Future (FF) ".

[11] 3GPP [TS 23.542](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=4156): "Application layer support for Personal IoT Networks".

[12] 3GPP [TS 23.554](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3818): "Application architecture for MSGin5G Service; Stage 2".

[13] 3GPP [TS 29.222](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3450): "Common API Framework for 3GPP Northbound APIs; stage 3".

[14] 3GPP [TS 33.122](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3420): "Security aspects of Common API Framework (CAPIF) for 3GPP Northbound APIs".

[15] "The Ecosystem for Open Gateway NaaS API Development", white paper, June 2023 [[link](https://www.gsma.com/solutions-and-impact/gsma-open-gateway/wp-content/uploads/2023/05/The-Ecosystem-for-Open-Gateway-NaaS-API-development.pdf)]

[16] "GSMA Operator Platform Group – Requirements and Architecture", version 5.0, July 2023 [[link](https://www.gsma.com/futurenetworks/wp-content/uploads/2023/07/OPG.02-v5.0-Operator-Platform-Requirements-and-Architecture.pdf)]

[17] 3GPP TS 28.532: "Management and orchestration; Generic management services".

[18] 3GPP [TS 28.531](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3274): "Management and orchestration; Provisioning"

[19] 3GPP [TS 23.435](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=4092): "Procedures for Network Slice Capability Exposure for Application Layer Enablement Service"

[Y] 3GPP [TS 33.122](https://portal.3gpp.org/desktopmodules/Specifications/SpecificationDetails.aspx?specificationId=3450): "Security aspects of Common API Framework (CAPIF) for 3GPP northbound APIs".

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| **Second Change** |

## 3.3 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1] and the following apply. An abbreviation defined in the present document takes precedence over the definition of the same abbreviation, if any, in 3GPP TR 21.905 [1].

5GC 5G Core

CAPIF Common API Framework

CCF CAPIF Core Function

CSP Communication Service Provider

EAS Edge Application Server

ECS Edge Configuration Server

EDN Edge Data Network

EEC Edge Enabler Client

EES Edge Enabler Server

FF Factories of the Future

GSMA GSM Association

MnS Management Service (see TS28.533[2])

NaaS Network as a Service

NEF Network Exposure Function

NOP Network Operator

NSACF Network Slice Access Control Function

NSCE Network Slice Capability Enablement

NWDAF Network Data Analytics Function

OAM Operation, Administration and Maintenance

OPAG Operator Platform API Group

OPG Operator Platform Group

SEAL Service Enabler Abstraction Layer

UAS Uncrewed Aerial Systems

V2X Vehicle-to-Everything

VAE Vertical App Enabler

WAS Whole Agreement Services

WG Working Group

AMF API management function

AEF API exposing function

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| **Third Change** |

## 5.1 Exposure of management services

### 5.1.W Use case #<W>: Logging the management service API invocations to the CCF

#### 5.1.W.1 Description

When exposing management services for consumption by the external MnS consumers (referred to as the API invoker in CAPIF terms), it is crucial to monitor, for example, what management service API was invoked (i.e., the MOIs, attributes or operations), who invoked the API (i..e., the ID of the external MnS consumer), the result of the invocation (e.g., success, or failure) and at what time it was invoked.

Accordingly, the MnS producer (which acts as the CAPIF AEF) should be able to create the management service API (now service API) invocation log(s) (see clause 8.7 of TS 29.222[13]) with the desired information. Subsequently, the MnS producer should be able to send the invocation log(s) to the CCF via the CAPIF-3 interface. The stored logs of the service API invocations can be consumed by authorized consumers (e.g., CAPIF API AMF for auditing purposes and the charging functions). However, currently, the MnS producers do not support these functionalities.

#### 5.1.W.2 Potential requirements

**PREQ-FS\_MExpo-01** The 3GPP management system should support the capability to create logs based on the management service API invocations by external MnS consumers.

**PREQ-FS\_MExpo-02** The 3GPP management system should support the capability to log the management service API invocations (by the external MnS consumers) to the CCF.

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| **End of Changes** |