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Technical Specification

3rd Generation Partnership Project;

Technical Specification Group Services and System Aspects;

Telecommunication management;

Performance Management (PM) for mobile networks that include virtualized network functions;

Stage 3

(Release 16)

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***3GPP***

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis

Valbonne - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

http://www.3gpp.org

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# Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

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where:

x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

3 or greater indicates TSG approved document under change control.

y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

# Introduction

The present document is part of a TS-family covering the 3rd Generation Partnership Project Technical Specification Group Services and System Aspects, Telecommunication Management; as identified below:

TS 28.520: Telecommunication management; Performance Management (PM) for mobile networks that include virtualized network functions; Requirements

TS 28.521: Telecommunication management; Performance Management (PM) for mobile networks that include virtualized network functions; Procedures

TS 28.522: Telecommunication management; Performance Management (PM) for mobile networks that include virtualized network functions; Stage 2

**TS 28.523: Telecommunication management; Performance Management (PM) for mobile networks that include virtualized network functions; Stage 3**

# 1 Scope

The present document is the Performance Management stage 3 specification for mobile networks that include virtualized network functions.

# 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 28.500: "Telecommunication management; Management concept, architecture and requirements for mobile networks that include virtualized network functions".

[3] 3GPP TS 32.416:"Telecommunication management; Performance Management (PM) Integration Reference Point (IRP); Solution Set (SS) definitions".

[4] ETSI GS NFV SOL 002 (V0.0.2) (2016-05): "Network Functions Virtualisation; Protocols and Data Models; RESTful protocols specification for the Ve-Vnfm Reference Point; Release 2".

# 3 Definitions and abbreviations

## 3.1 Definitions

For the purposes of the present document, the terms and definitions given in 3GPP TR 21.905 [1], in 3GPP TS 28.500 [2] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1] or in 3GPP TS 28.500 [2].

## 3.2 Abbreviations

For the purposes of the present document, the abbreviations given in 3GPP TR 21.905 [1], in 3GPP TS 28.500 [2] 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] or in 3GPP TS 28.500 [2].

# 4 General descriptions

The stage 3 solution over Itf-N reuses the solution sets for PM IRP as specified in 3GPP TS 32.416 [3]. The stage 3 solution over Ve-Vnfm-em reuses the solutions for performance management interface as specified in ETSI GS NFV SOL 002 [4].

# 5 Interface Solution Sets

## 5.1 Itf-N

For the stage 3 solution of Performance Management for mobile networks that include virtualized network functions over Itf-N, the solution sets for PM IRP specified in 3GPP TS 32.416 [3] are reused.

## 5.2 Os-Ma-nfvo

None.

## 5.3 Ve-Vnfm-em

For the stage 3 solution of Performance Management for mobile networks that include virtualized network functions over Ve-Vnfm-em, the following shall be used:

- the RESTful API resource structure and methods specified in clause 4.2 of ETSI GS NFV-SOL 002 [4], and

- the RESTful API sequence diagrams specified in clause 6.3 of ETSI GS NFV-SOL 002 [4], and

- the RESTful API resources specified in clause 6.4 of ETSI GS NFV-SOL 002 [4], and

- the RESTful API data model specified in clause 6.5 of ETSI GS NFV-SOL 002 [4].

## 5.4 Ve-Vnfm-vnf

None.

Annex A (informative):  
Change history

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Change history** | | | | | | | |
| **Date** | **Meeting** | **TDoc** | **CR** | **Rev** | **Cat** | **Subject/Comment** | **New version** |
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| 2017-06 | SA#76 |  |  |  |  | Upgrade to change control version | 14.0.0 |
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