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Network Functions Virtualisation (NFV);
Testing Methodology;
Report on NFV Interoperability Testing Methodology

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Foreword

This Group Specification (GS) has been produced by ETSI Industry Specification Group (ISG) Network Functions Virtualisation (NFV).

Modal verbs terminology

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Executive summary

The present document studies how interoperability test methodology can be applied to NFV by analysing some of the core NFV capabilities and the interactions between the functional blocks defined within the NFV architectural framework required to enable them.

Introduction

The present document provides methodology guidelines for interoperability testing of NFV features, starting from a review of some basic concepts for interoperability testing and their fit in an NFV environment and a methodology for the development of interoperability test specifications illustrated with examples of basic NFV operations. A high level analysis of some core NFV capabilities allows to identify a generic architecture for the associated System Under Test configurations, and to classify some initial Interoperability Feature areas.

The present document is organized as follows:

- Clause 4 provides an overview of common interoperability concepts and testing methodology guidelines.
- Clause 5 identifies a generic system under test (SUT) architecture and some initial SUT configurations for interoperability testing of basic NFV capabilities.
- Clause 6 identifies and analyses some initial NFV interoperability feature areas and outlines for each of them the impacted functional blocks and interfaces, as well as the applicable SUT configurations described in clause 5.

1 Scope

The present document provides some guidelines for NFV interoperability testing and identifies a generic System Under Test (SUT) architecture for NFV, some initial SUT configurations, and some interoperability feature areas derived from core NFV capabilities.

2 References

2.1 Normative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

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The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] ISO/IEC 9646 (parts 1 to 7): "Information technology - Open Systems Interconnection - Conformance testing methodology and framework".

[i.2] ETSI EG 202 237: "Methods for Testing and Specification (MTS); Internet Protocol Testing (IPT); Generic approach to interoperability testing".

[i.3] ETSI EG 202 568: "Methods for Testing and Specification (MTS); Internet Protocol Testing (IPT); Testing: Methodology and Framework". .

[i.5] ETSI GS NFV 002: "Network Functions Virtualisation (NFV); Architectural Framework".

[i.6] ETSI GS NFV-MAN 001: "Network Functions Virtualisation (NFV); Management and Orchestration".

[i.7] ETSI GS NFV-IFA 010 (V2.1.1): "Network Functions Virtualisation (NFV); Management and Orchestration; Functional requirements specification".

[i.8] ETSI GS NFV-IFA 005 (V2.1.1): "Network Functions Virtualisation (NFV); Management and Orchestration; Or-Vi reference point - Interface and Information Model Specification".

[i.9] ETSI GS NFV-IFA 006: "Network Functions Virtualisation (NFV); Management and Orchestration; Vi-Vnfm reference point - Interface and Information Model Specification".