ETSI GR NFV-IFA 024 V3.2.1 (2019-04)

GROUP REPORT

Network Functions Virtualisation (NFV) Release 3; Information Modeling; Report on External Touchpoints related to NFV Information Model

Reference

RGR/NFV-IFA024ed321

Keywords

information model, NFV, UML

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Foreword

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

Modal verbs terminology

In the present document **"should"**, **"should not"**, **"may"**, **"need not"**, **"will"**, **"will not"**, **"can"** and **"cannot"** are to be interpreted as described in clause 3.2 of the ETSI Drafting Rules (Verbal forms for the expression of provisions).

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1   Scope

The present document is an informative report defining the touchpoints/relations between the NFV Information Model [i.1] and information models from other organizations.

2   References

2.1   Normative references

Normative references are not applicable in the present document.

2.2   Informative 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.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

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]   ETSI GR NFV-IFA 015: "Network Functions Virtualisation (NFV); Management and Orchestration; Report on NFV Information Model".

[i.2]   Eclipse™ Gendoc tool.

NOTE: Available at http://www.eclipse.org/gendoc/.

[i.3]   TM Forum GB922 R15.5.1: "TM Forum Information Framework".

[i.4]   ONF™ TR-512: "Core Information Model (CoreModel) version 1.1", November 2015.

NOTE: Available at https://www.opennetworking.org/software-defined-standards/models-apis/.

[i.5]   ETSI TS 128 622 (V13.1.0): "Universal Mobile Telecommunications System (UMTS); LTE; Telecommunication management; Generic Network Resource Model (NRM) Integration Reference Point (IRP); Information Service (IS) (3GPP TS 28.622 version 13.1.0 Release 13)".

[i.6]   ETSI GR NFV 003: "Network Functions Virtualisation (NFV); Terminology for Main Concepts in NFV".

[i.7]   ETSI TS 128 541: "5G; Management and orchestration; 5G Network Resource Model (NRM); Stage 2 and stage 3 (3GPP TS 28.541 Release 15)".

3   Definition of terms, symbols and abbreviations

3.1   Terms

For the purposes of the present document, the terms given in ETSI GR NFV 003 [i.6] apply.

3.2   Symbols

Void.

3.3   Abbreviations

For the purposes of the present document, the abbreviations given in ETSI GR NFV 003 [i.6] and the following apply:

UML®   Unified Modelling Language

4   Overview

4.1   Introduction

The NFV Information Model, defined by ETSI GR NFV-IFA 015 [i.1], is focused on the management of the virtualisation aspects. Other models exist defined by other organizations and to provide an end-to-end model view, it is useful to be able to federate the NFV Information Model with other external models.

The approach used is to define interaction points between the NFV Information Model and some models from other organizations, allowing all organizations to extend their model based on the interaction points as they see needed.

The NFV Touchpoint Model, provided in annex A, only describes the touchpoints between various models.

The classes involved from each external model are defined in separate Papyrus models.

Both those external Papyrus models as well as the NFV Information Model are loaded as read-only in the NFV Touchpoint Model to create the needed relations between the models. This allows the NFV Information Model to remain independent of any external model.

4.2   Relation to other ETSI NFV ISG Specifications

The present document is referencing information from the following ISG NFV Group Specification:

- Network Function Virtualisation (NFV); Management and Orchestration; Report on NFV Information Model ETSI GR NFV-IFA 015 [i.1].

5   Touchpoints with external models

5.1   Touchpoints with ONF™ Core Model

For the current release of the NFV Information Model, the external Network Resource model is provided by the ONF™ Core Model [i.4].

The needed classes from the ONF™ Core Model are defined in the External Network Resource Model and are outside of ETSI NFV scope.

Figure 5.1-1 shows the touchpoints between the NFV Information Model and the External Network Resource Model at Virtualised Resource level.
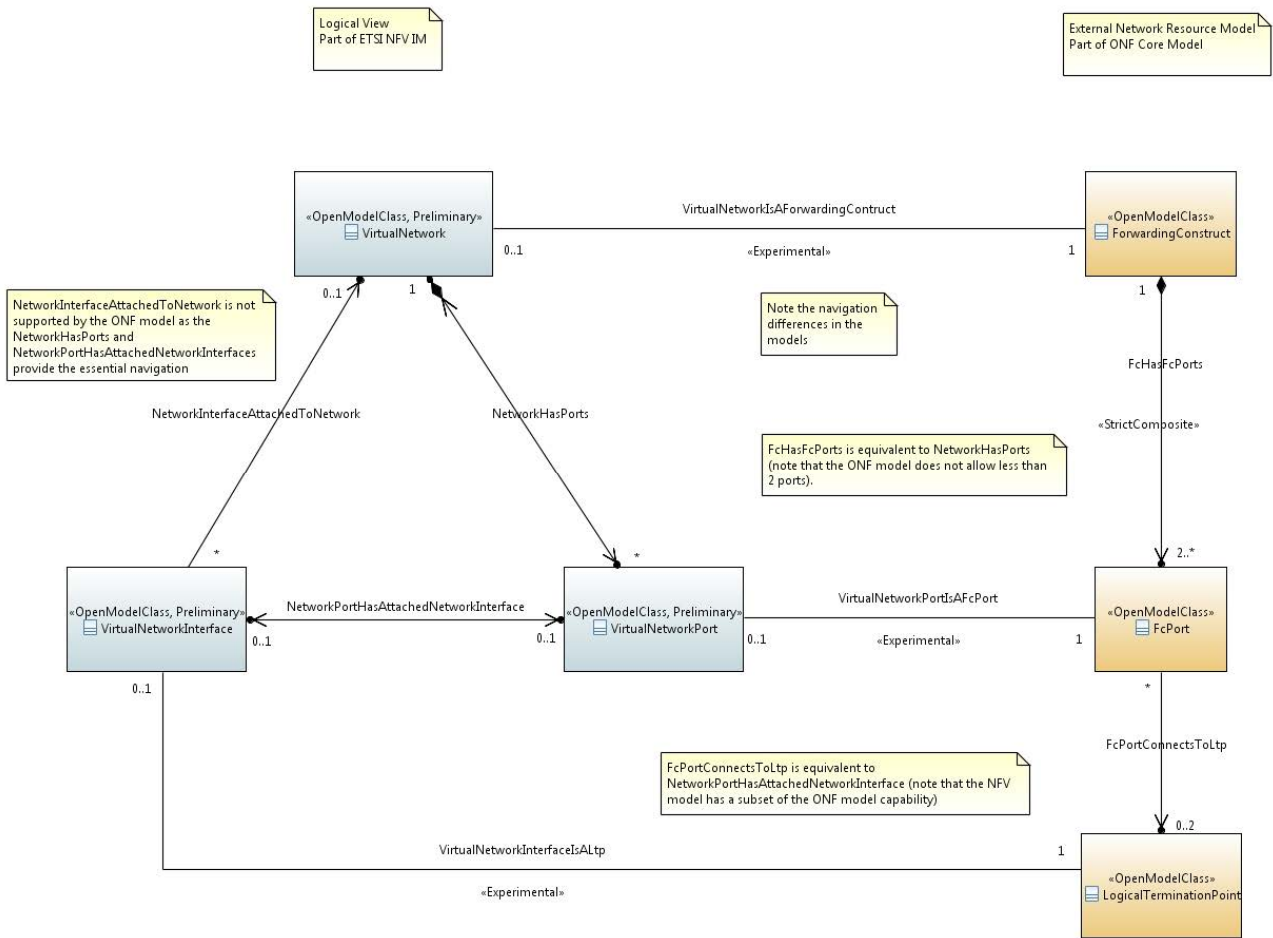
**Figure 5.1-1: Touchpoints between NFV Information Model and
ONF™ Core Model at Virtualised Resource level**

Figure 5.1-2 shows the touchpoints between the NFV Information Model and the External Network Resource Model at Virtual Link level.
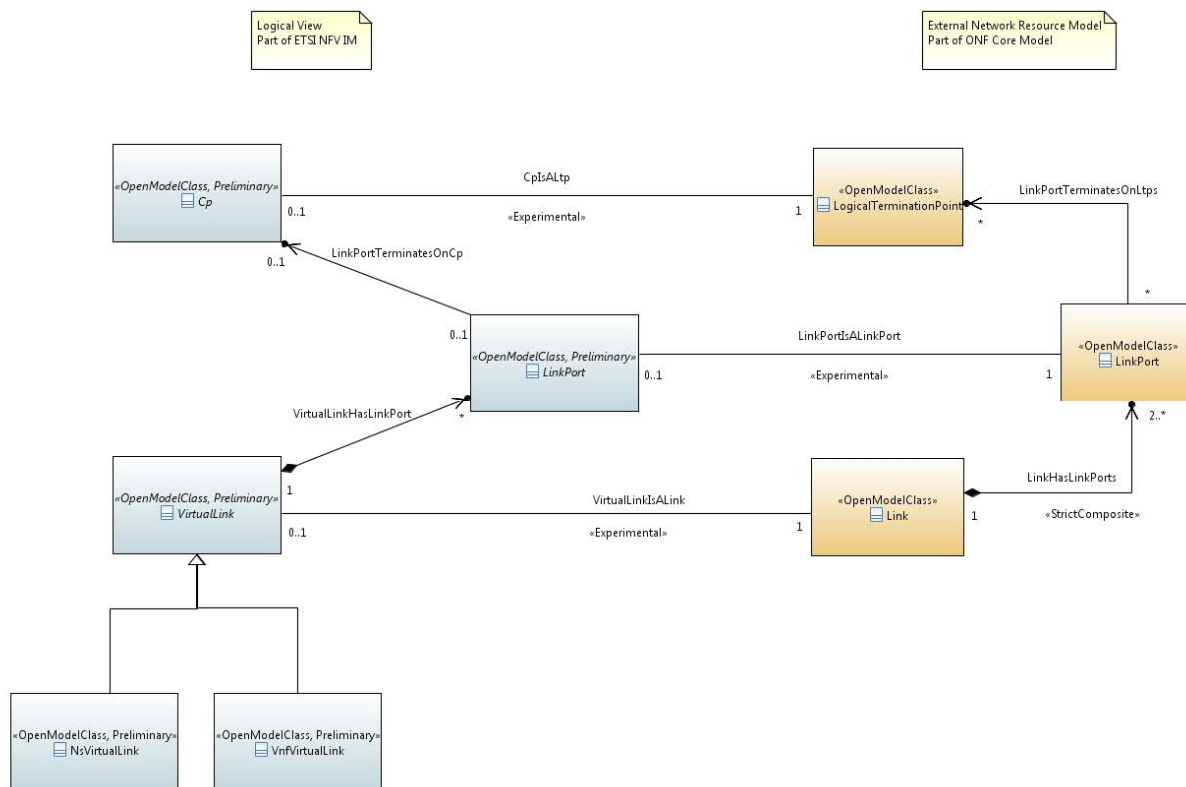
**Figure 5.1-2: Touchpoints between NFV Information Model and
ONF™ Core Model at Virtual Link level**

5.2 Touchpoints with TM Forum model

5.2.1 Touchpoints with TM Forum Service Model

For the current release of the NFV Information Model, the external Service Model is provided as a subset of the TM Forum Informational Framework (SID) [i.3] Service Model.

The needed classes are defined in the External Service Model and are outside of ETSI NFV scope.

Figure 5.2.1-1 shows the touchpoints between the NFV Information Model and the External Service Model.
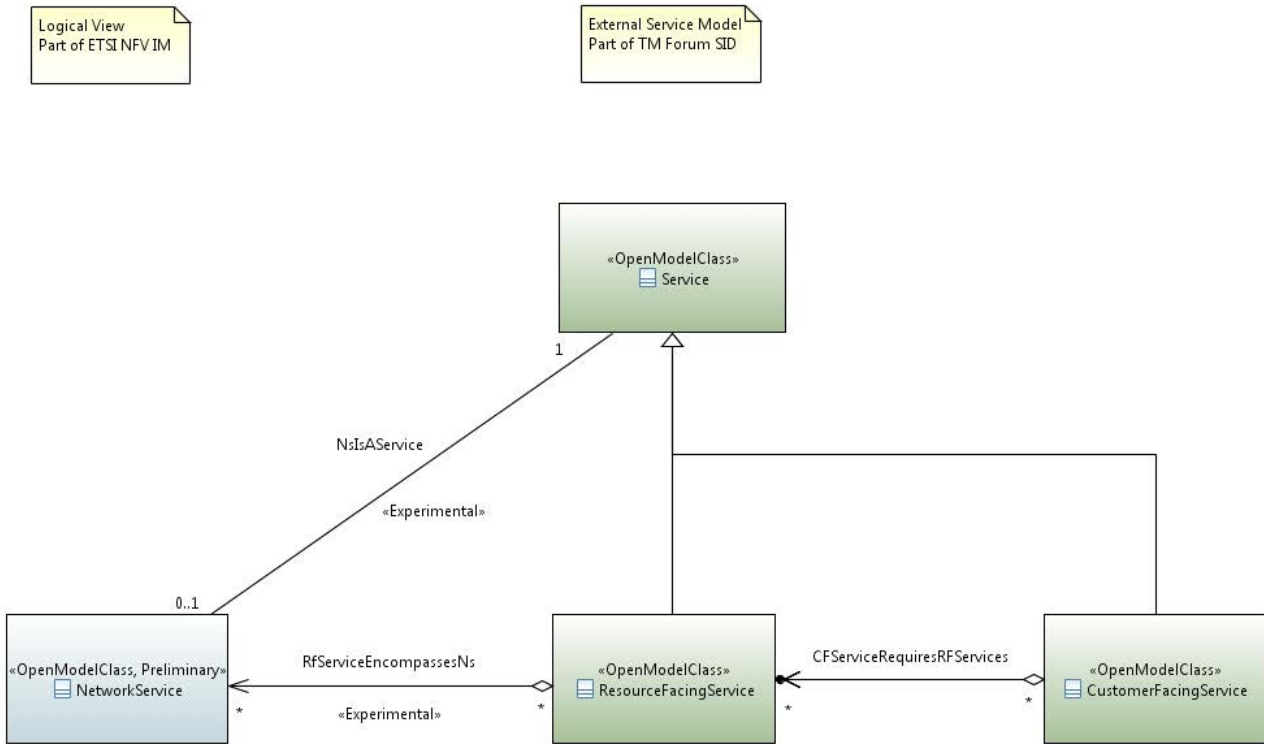
Figure 5.2.1-1: Touchpoints between NFV Information Model and External Service Model

5.2.2   Touchpoints with TM Forum Resource Model

For the current release of the NFV Information Model, the external Resource Model is provided as a subset of the TM Forum Informational Framework (SID) [i.3] Resource Model.

The needed classes are defined in the External Resource Model and are outside of ETSI NFV scope.

Figure 5.2.2-1 shows the touchpoints between the NFV Information Model and the External Resource Model.
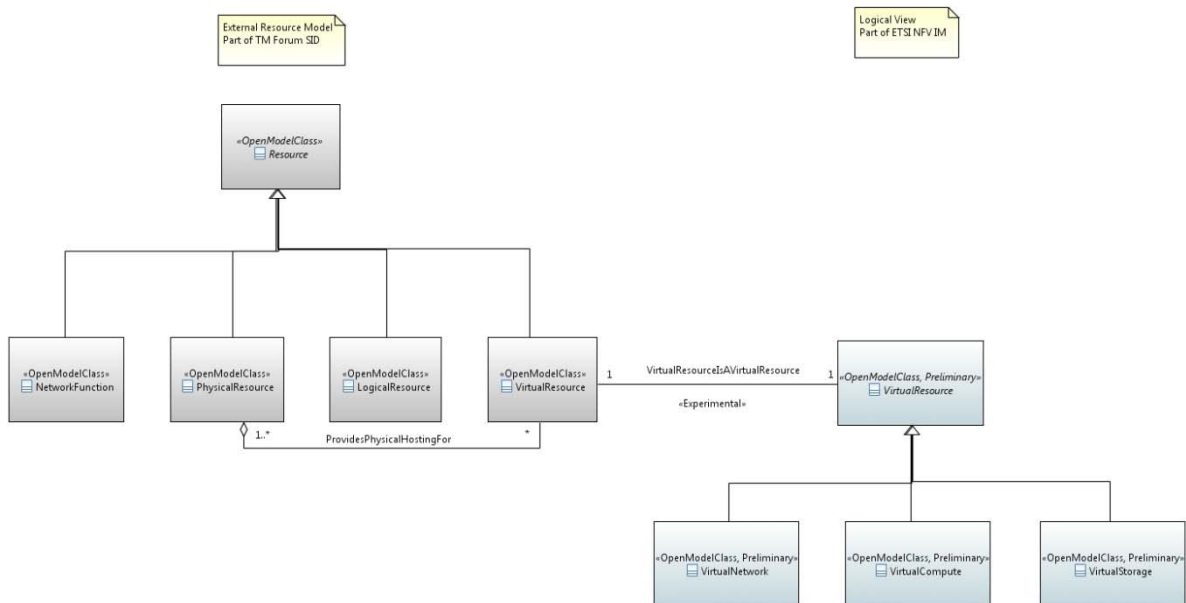

Figure 5.2.2-1: Touchpoints between NFV Information Model and External Resource Model

5.3 Touchpoints with 3GPP Models

5.3.1 Touchpoints with 3GPP Generic Network Resource Model

For the current release of the NFV Information Model, the external Application Model is provided as a subset of the 3GPP Generic Network Resource Model [i.5].

The needed classes are defined in the External Application Model and are outside of ETSI NFV scope.

Figure 5.3.1-1 shows the touchpoints between the NFV Information Model and the External Application Model.

Figure 5.3.1-1: Touchpoints between NFV Information Model and External Application Model

5.3.2 Touchpoints with 3GPP Network Slicing Model

For the current release of the NFV Information Model, the touchpoint to network slicing is defined according to ETSI TS 128 541 [i.7], in clause 6.2.1.

The needed classes describing the network slices and subnets as well as the managed functions used for the slices are defined in 3GPP and thus outside of ETSI NFV scope.

Figure 5.3.2-1 shows the touchpoints between the NFV Information Model and the Network Slicing Model.

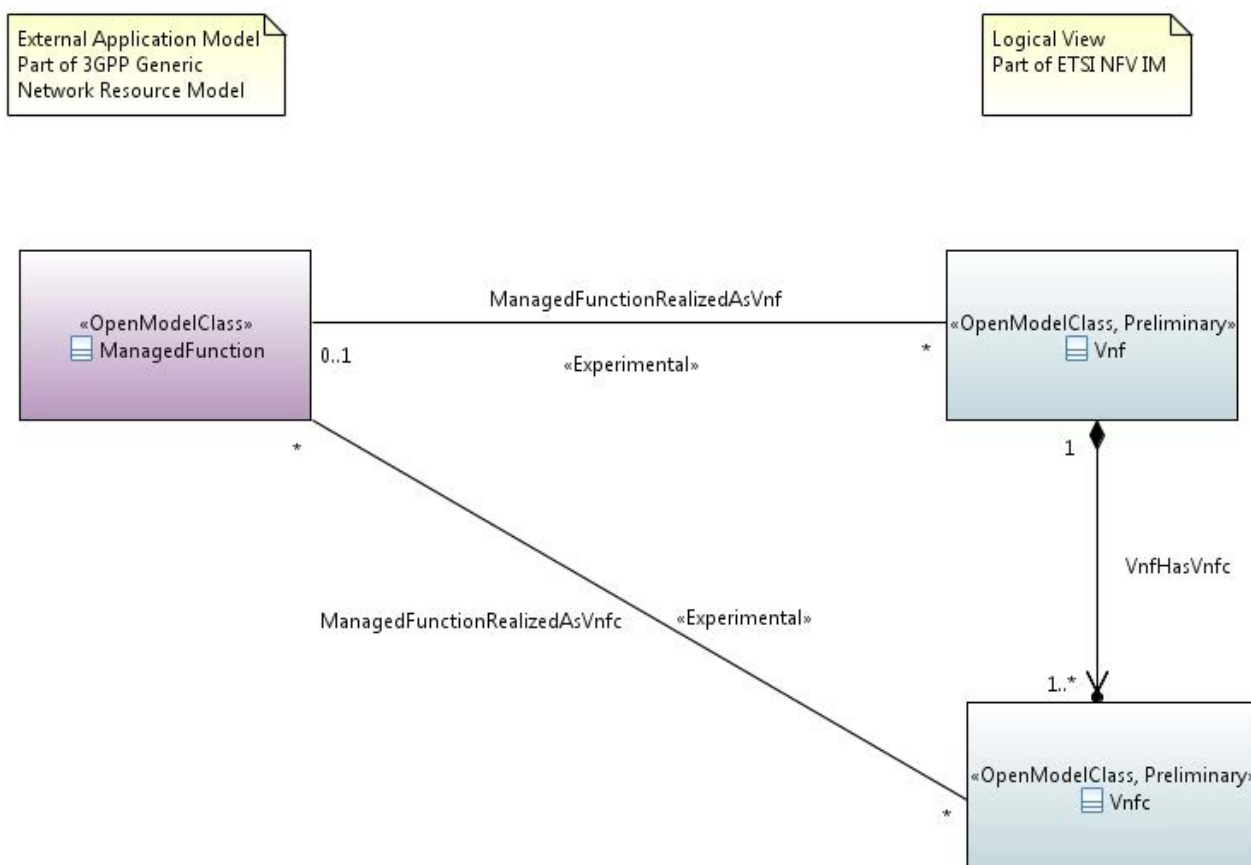Network Slice Model
Part of 3GPP 5G Network Resource Model

Logical View
Part of ETSI NFV IM

«OpenModelClass»
NetworkSlice

1

1

«DataType»
ServiceProfile

*

1

«OpenModelClass»
NetworkSliceSubnet

*

*

*

0..1

«OpenModelClass, Preliminary»
NetworkService

NsIncludesNf

*

*

1

*

«DataType»
SliceProfile

*

«OpenModelClass»
ManagedFunction

0..1
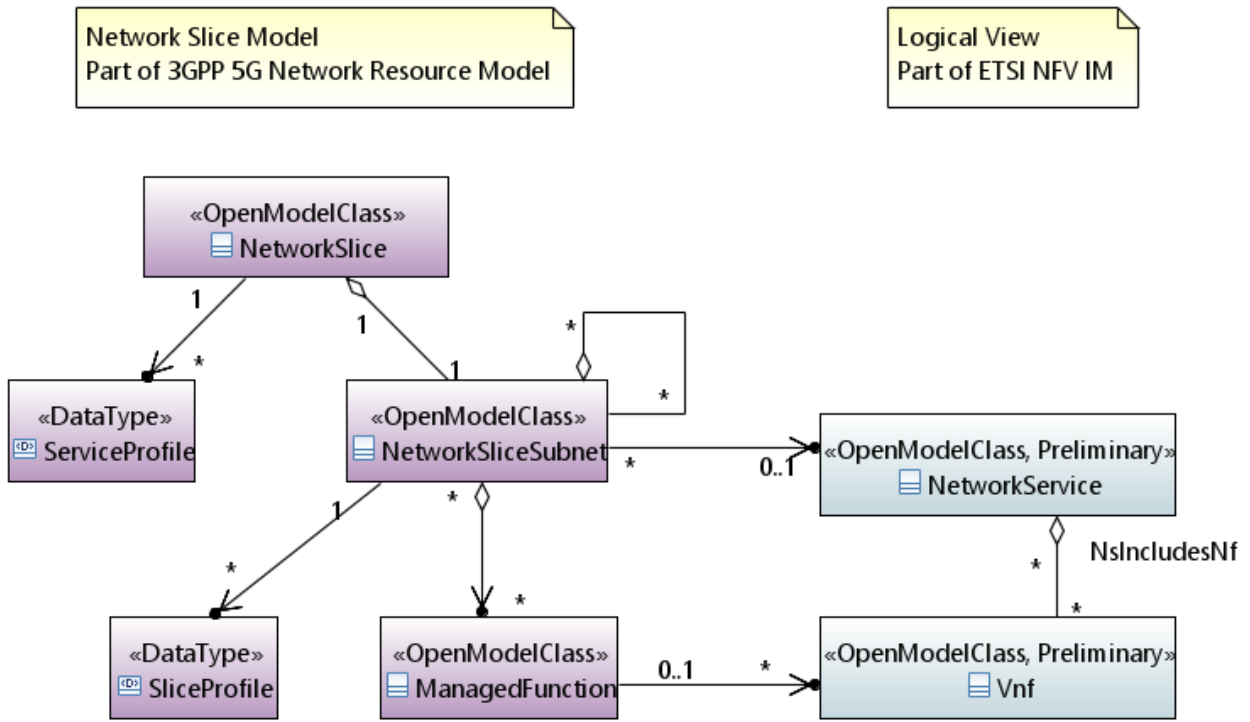
*

«OpenModelClass, Preliminary»
Vnf

Figure 5.3.2-1: Touchpoints between NFV Information Model and Network Slicing Model

Annex A:
NFV Touchpoint model

The NFV Touchpoint model (NfvTouchpointModelv311.docx) built using the Papyrus UML tool is contained in a compressed file named gr_nfv-ifa024v030201p0.zip which accompanies the present document.

Annex B:
Word format presentation of the NFV Touchpoint model

The Word format presentation of the NFV Touchpoint model is generated from the NFV UML Touchpoint Information model using the tool Gendoc available at [i.2]. The format is provided to assist the reader that do not use UML or have no access to UML tools.

The Word format presentation of the NFV Touchpoint model is a file NfvTouchpointModelv311.docx which is contained in a zip file gr_nfv-ifa024v030201p0.zip and accompanies the present document.

Annex C:
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Annex D:
Change history

Date	Version	Information about changes
13 December 2018	V3.0.0	Base version for release 3
18 January 2019	V3.0.1	NFVIFA(18)0001091 FEAT05 IFA024 Add Slicing Touchpoint

History

Document history		
V2.1.1	March 2017	Publication
V3.2.1	April 2019	Publication