

# Welcome to the World of Standards

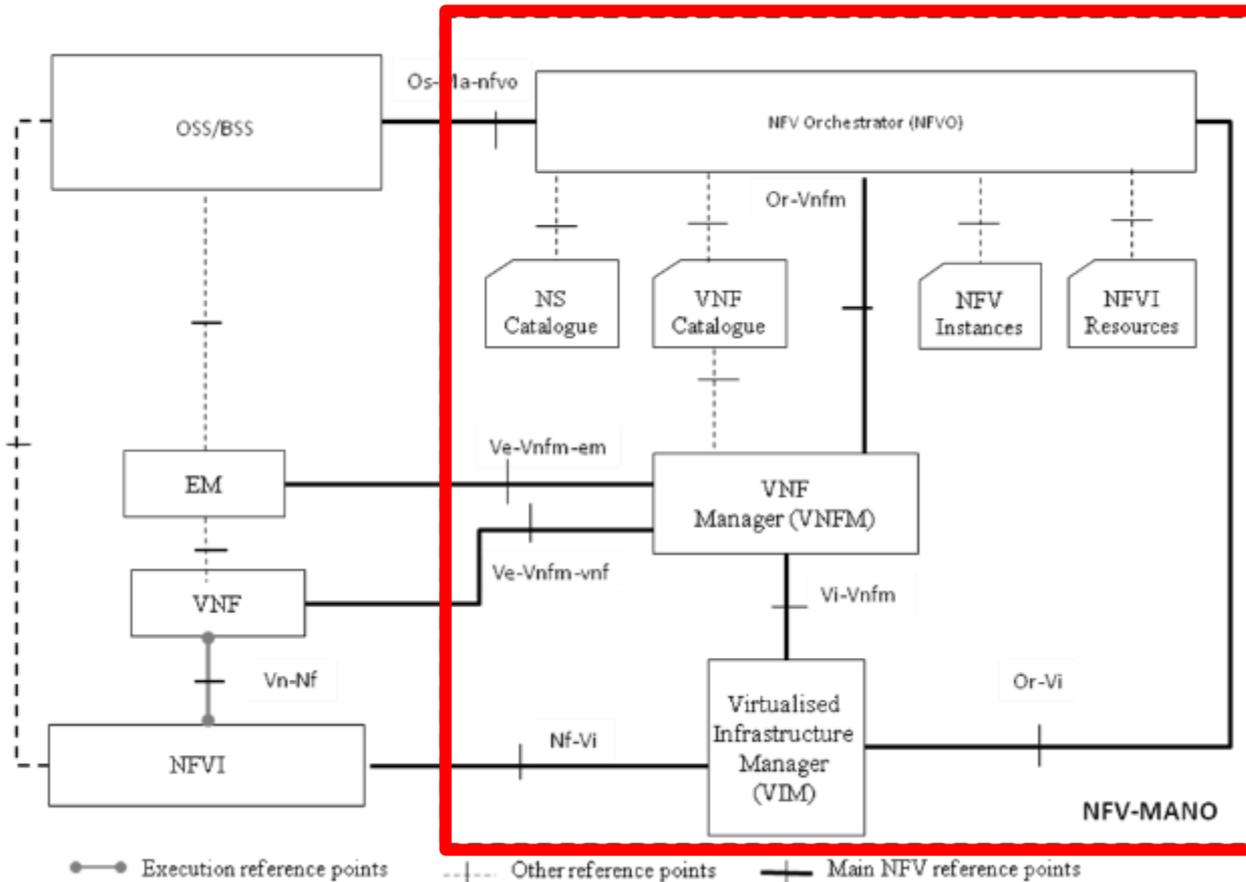


## **ETSI NFV Information Model Overview - An ETSI NFV ISG report for IM Workshop -**

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# Scope of NFV Information Model



Scope of ETSI  
NFV Information Model

## **ETSI NFV Information Model is WI IFA015**

- Created at NFV#11 (end of July) as informative WI
- Build upon the Information Elements developed in the others normative IFA Work Items and translate them into a UML NFV Information Model.
- Present a consolidated view of NFV Management and Orchestration model.

 **First draft (v0.0.1) issued on October 21<sup>st</sup>**

 **Second draft (v0.1.0) issued on November 19<sup>th</sup>**

 **Third draft (v0.2.0) issued on December 16th**  
**([http://docbox.etsi.org/ISG/NFV/Open/Drafts/IFA015\\_NFV\\_Information\\_Model/NFV-IFA015v020.zip](http://docbox.etsi.org/ISG/NFV/Open/Drafts/IFA015_NFV_Information_Model/NFV-IFA015v020.zip))**

 **More changes planned as lot of alignment activity with other IFA GSs still in progress and more alignment needed as other IFA GSs are progressing fast**

## Open Model Profile (UML)

Stereotypes

OpenModelClass	NamedBy	Experimental
OpenModelAttribute	Cond	LikelyToChange
OpenModelNotification	Names	Preliminary
OpenModelInterface	StrictComposite	Obsolete
OpenModelOperation	PruneAndRefactor	Example
OpenModelParameter	passedByReference	Faulty
	Choice	
	Exception	

**<<Stereotype>>  
OpenModelClass**

+ objectCreationNotification: NotificationDefinition [1] = NA  
 + objectDeletionNotification: NotificationDefinition [1] = NA  
 + support: supportQualifier [1] = MANDATORY  
 + condition: String [0..1]

Subsetting

## NFV Open Model Profile (UML)

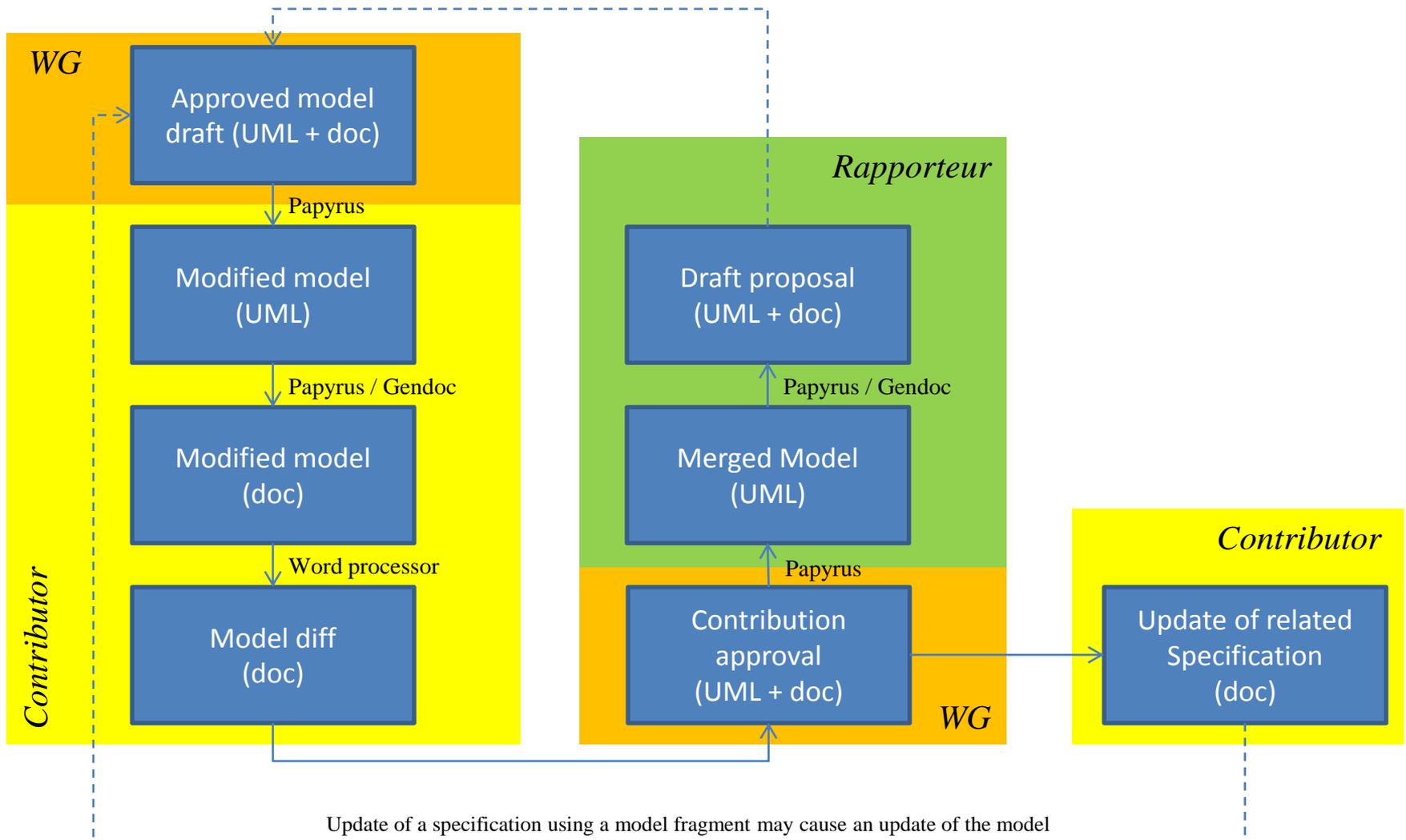
Stereotypes

OpenModelClass	passedByReference	Experimental
OpenModelAttribute		LikelyToChange
OpenModelNotification		Preliminary
		Obsolete
		Example
		Faulty

**<<Stereotype>>  
OpenModelClass**

+ support: supportQualifier [1] = MANDATORY  
 + condition: String [0..1]

# Common flow for IM changes in ETSI NFV



Update of a specification using a model fragment may cause an update of the model

## Approval of a model

- How to visualize differences between versions of a model?
- How to provide a complete version of the model which can be reviewed with reasonable effort?

## Model handling

- How to merge changes which have been approved into the main model?

# Example of gendoc diff



- Create doc of original model using gendoc
- Modify the model in Papyrus
- Create doc of modified model using gendoc
- Create diff between original and modified doc using Word
- Important: The doc produced by gendoc has to contain all information which is available in the model i.e. it needs to reflect all changes



## A.1.1.2.2 Classes

### A.1.1.2.2.1 Cpd class

**Qualified Name:** NfvInformationModel::CoreModel::CommonInformationDomain::CommonTemplateModule::Cpd  
**Description:** A Cpd information element describes network connectivity between a compute resource and a Virtual Link.

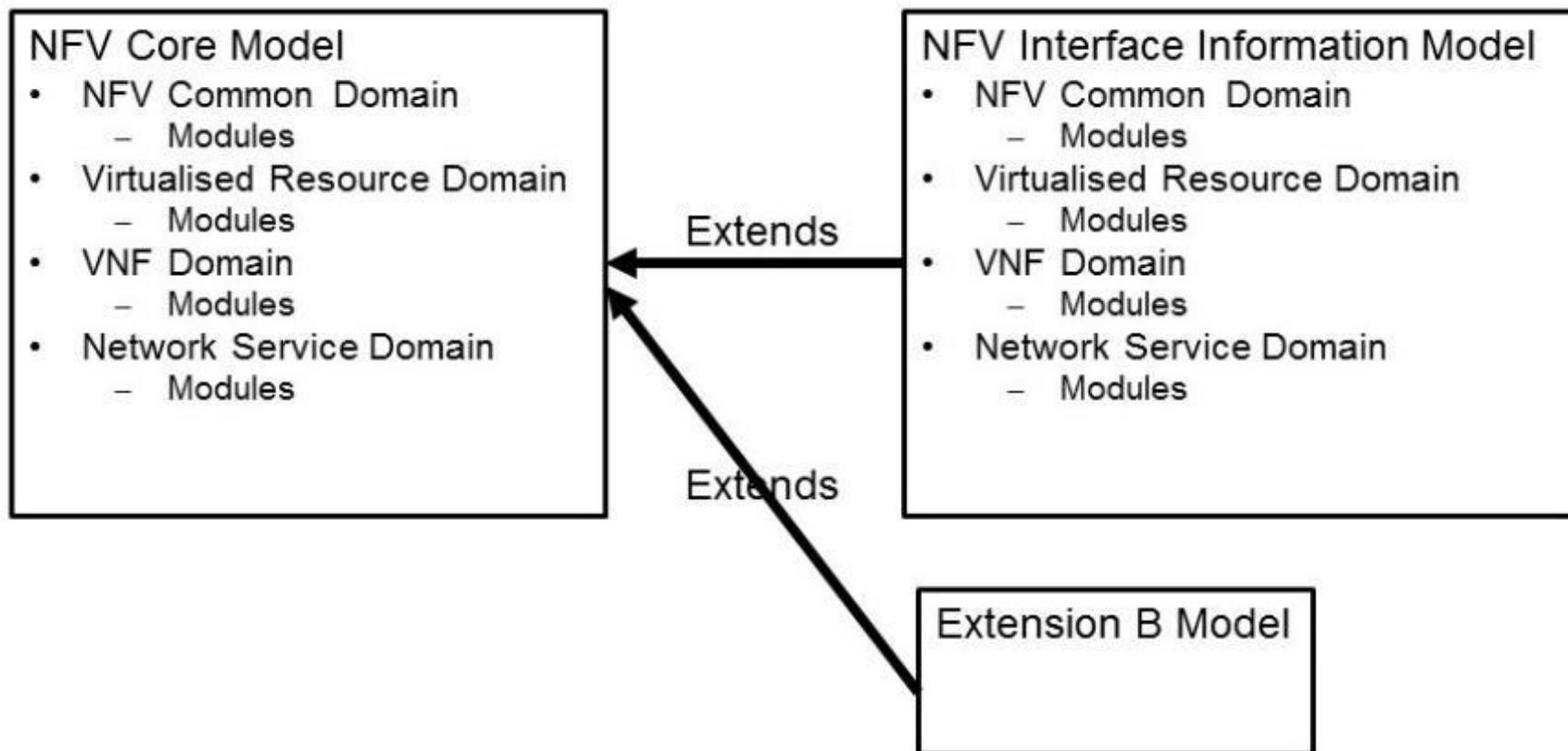
#### Abstract class

#### Applied Stereotypes:

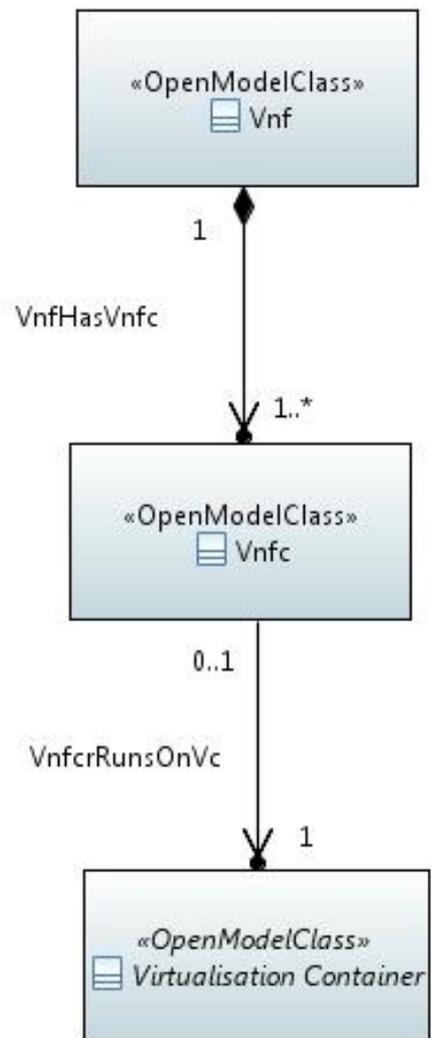
- Experimental
- OpenModelClass
- o support: MANDATORY

**Table 1 Attributes for Class Cpd**

Attribute Name	Type	Mult.	Description	Applied Stereotypes
id	Identifier	1	Identifies a connection point descriptor	OpenModelAttribute • support: MANDATORY
type	Connection PointType	1	Indicates whether the connection point is provided at layer 1, 2 or 3. NOTE: This information determines which type of address to assign to the connection point at instantiation time.	OpenModelAttribute • support: MANDATORY
subType		0..1	Identifies a sub-type that depends on the actual type. Layer 2: In case of E-TREE connectivity, this attribute also specifies whether the connection point is a root or leaf endpoint. Layer 3: Indicates whether IPv6 or IPv4 address shall be allocated to the connection point.	OpenModelAttribute • support: MANDATORY
description	String	0..1	Provides human-readable information on the purpose of the connection point (e.g. connection point for control plane traffic).	OpenModelAttribute • support: MANDATORY



# (Very) Basic VNF Logical Model

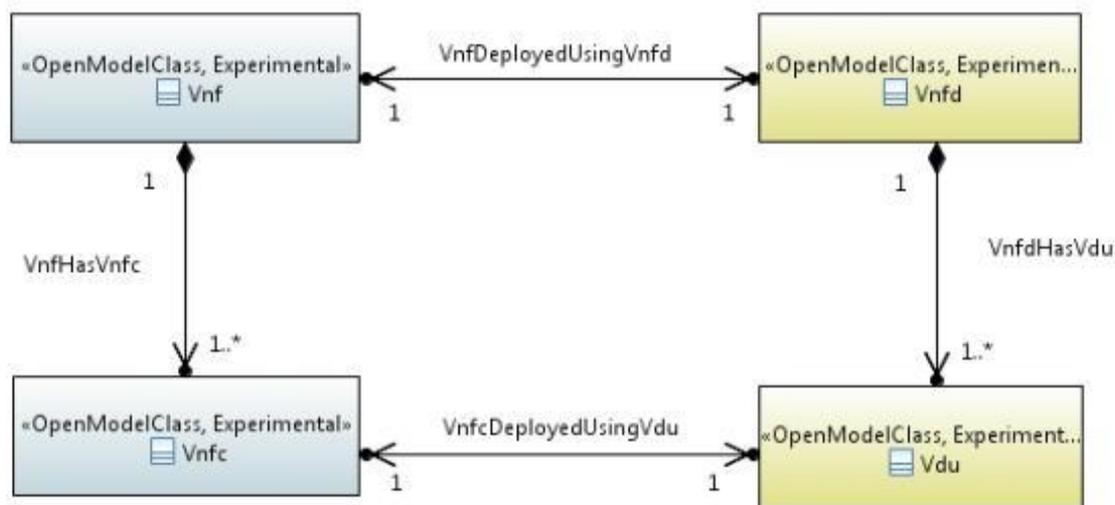


# (Very) Basic Deployment View

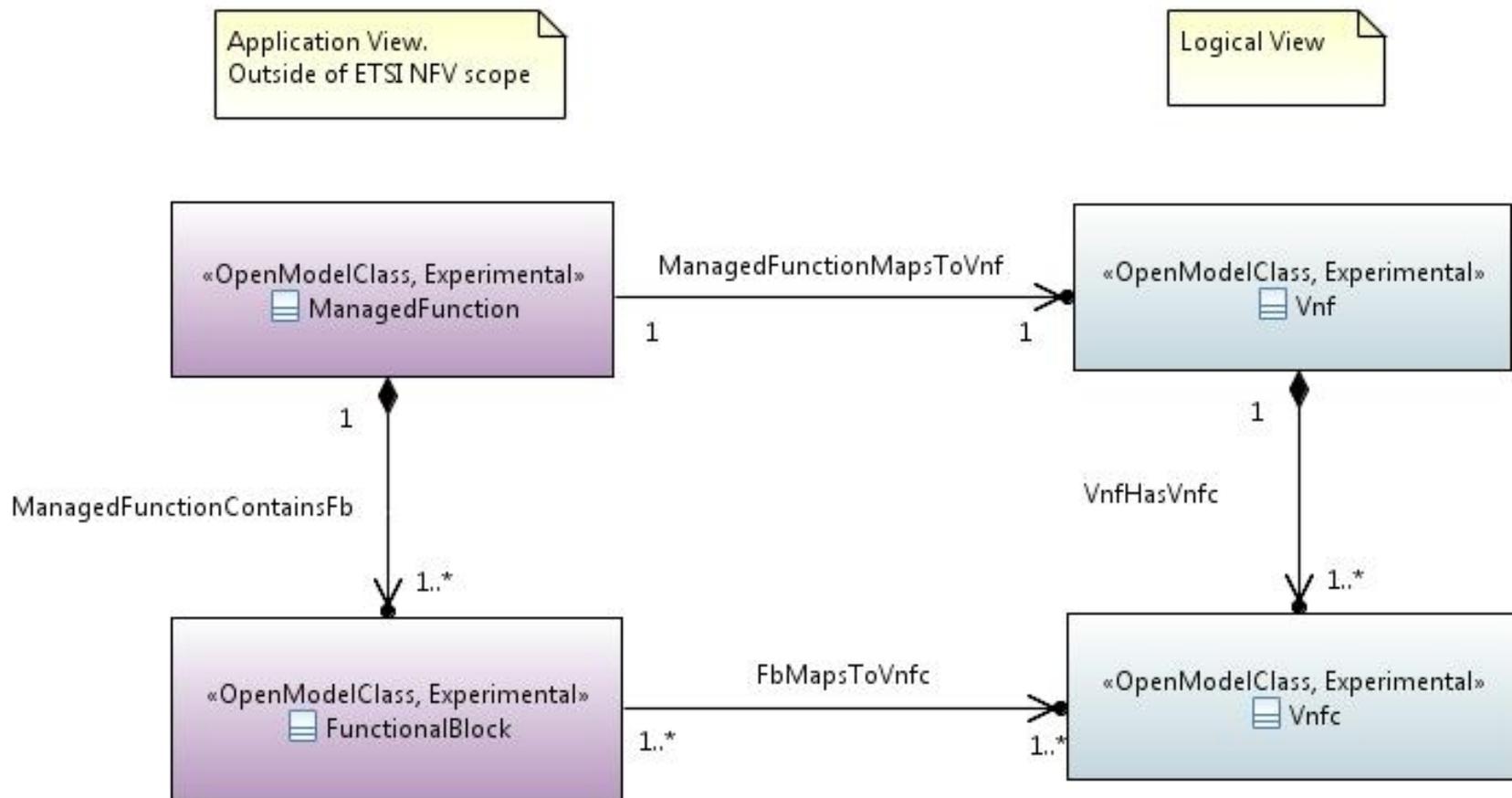


## Logical View

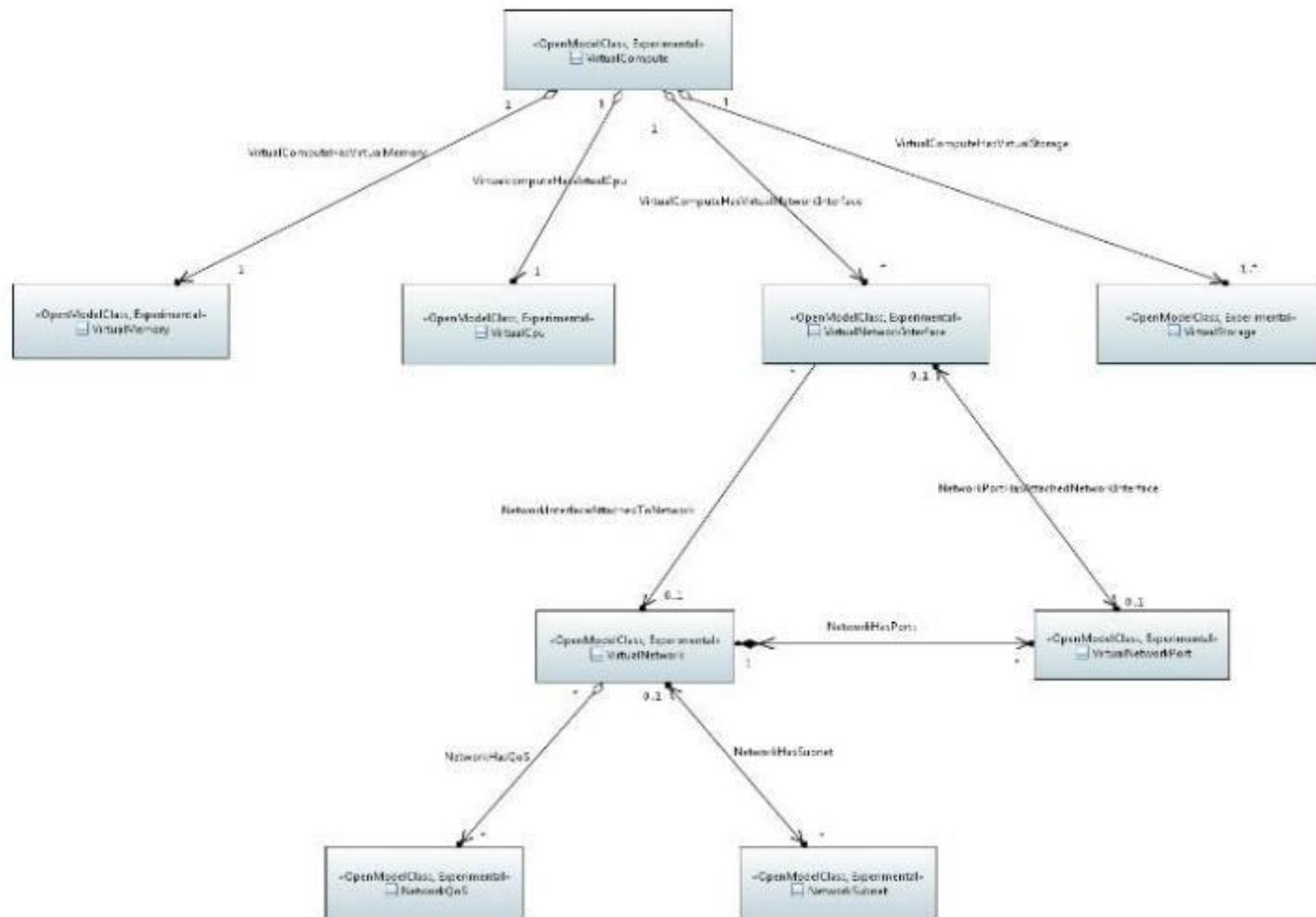
## Deployment View



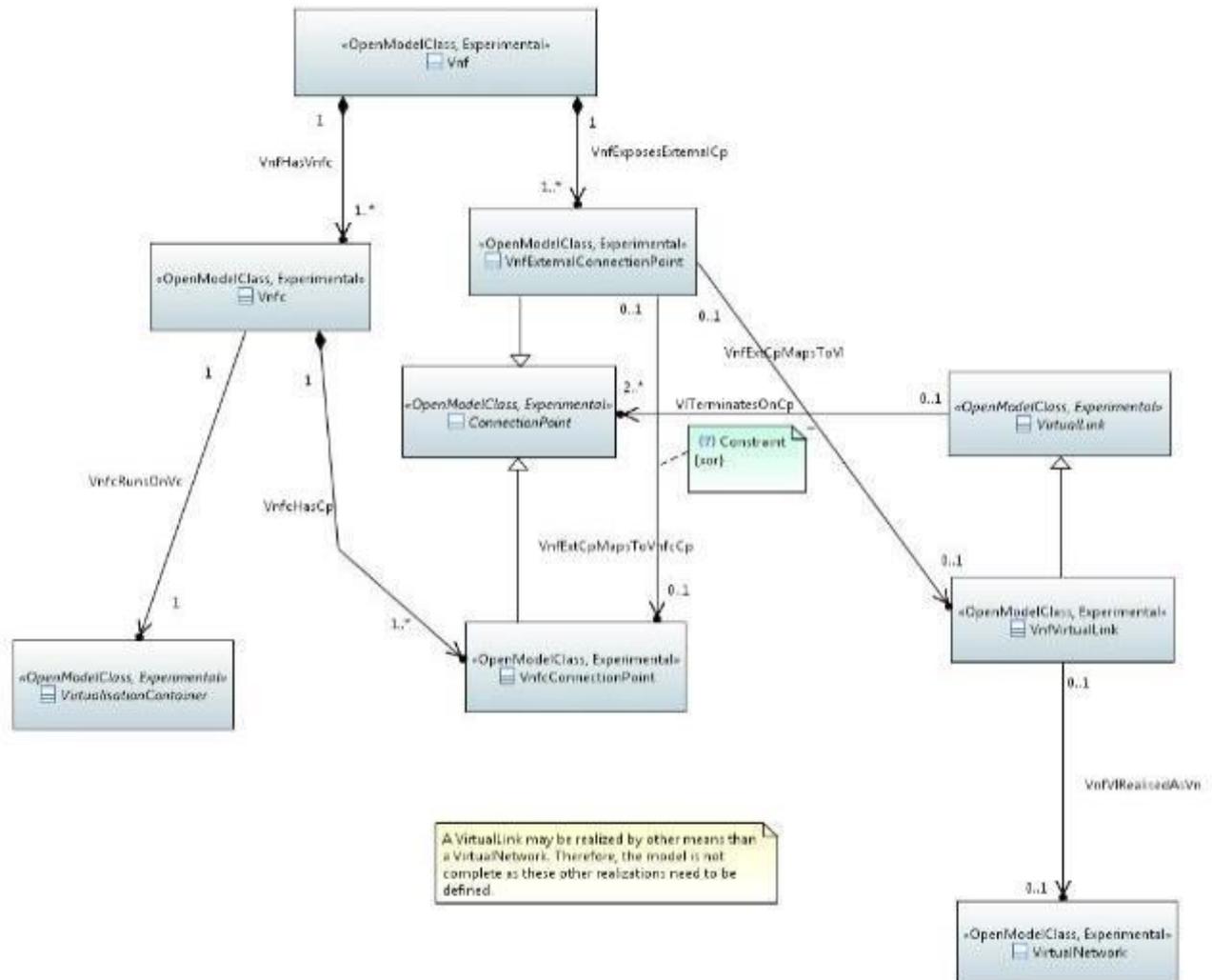
# (Very) Basic Application View



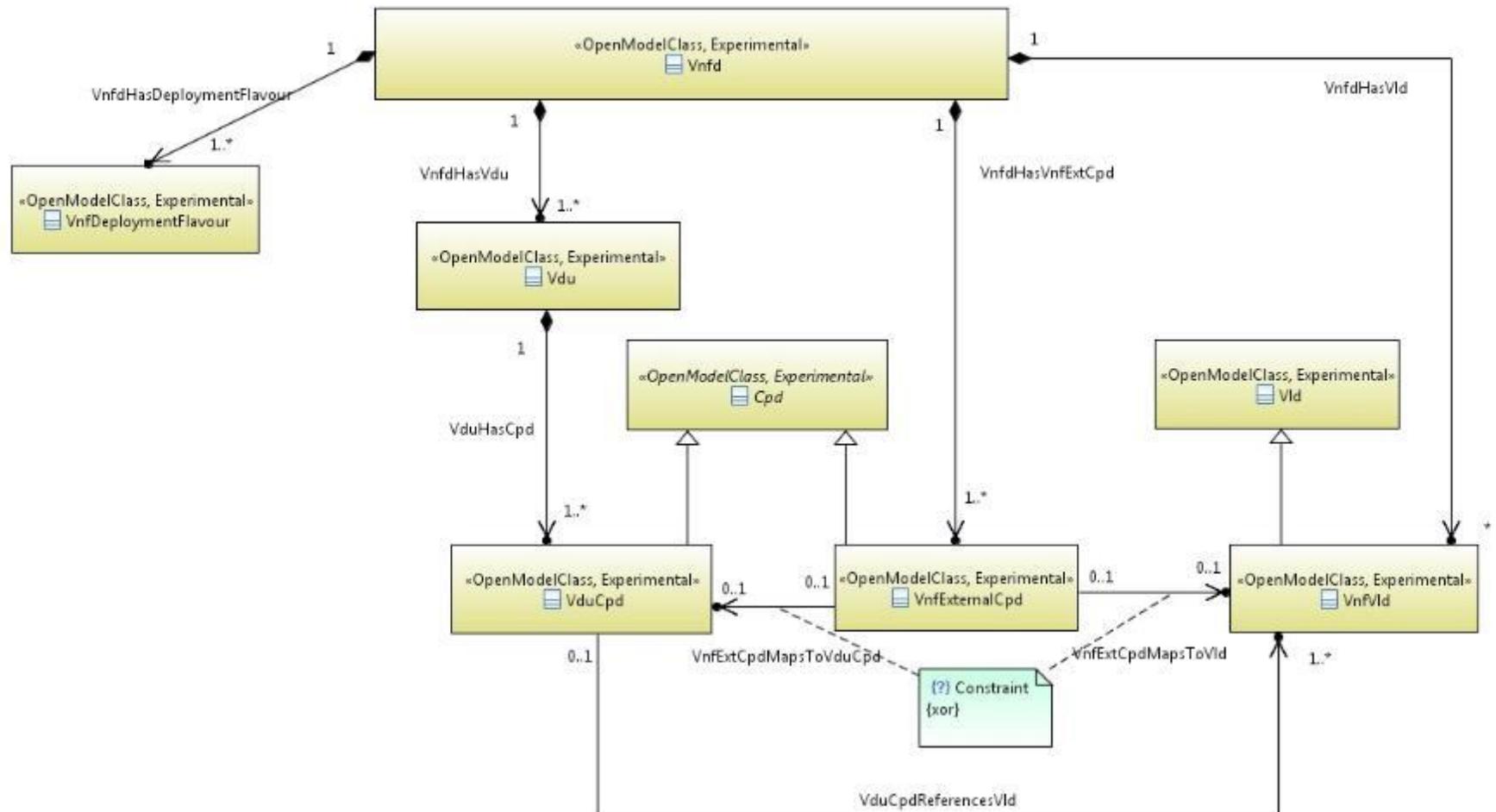
# Resource Logical View



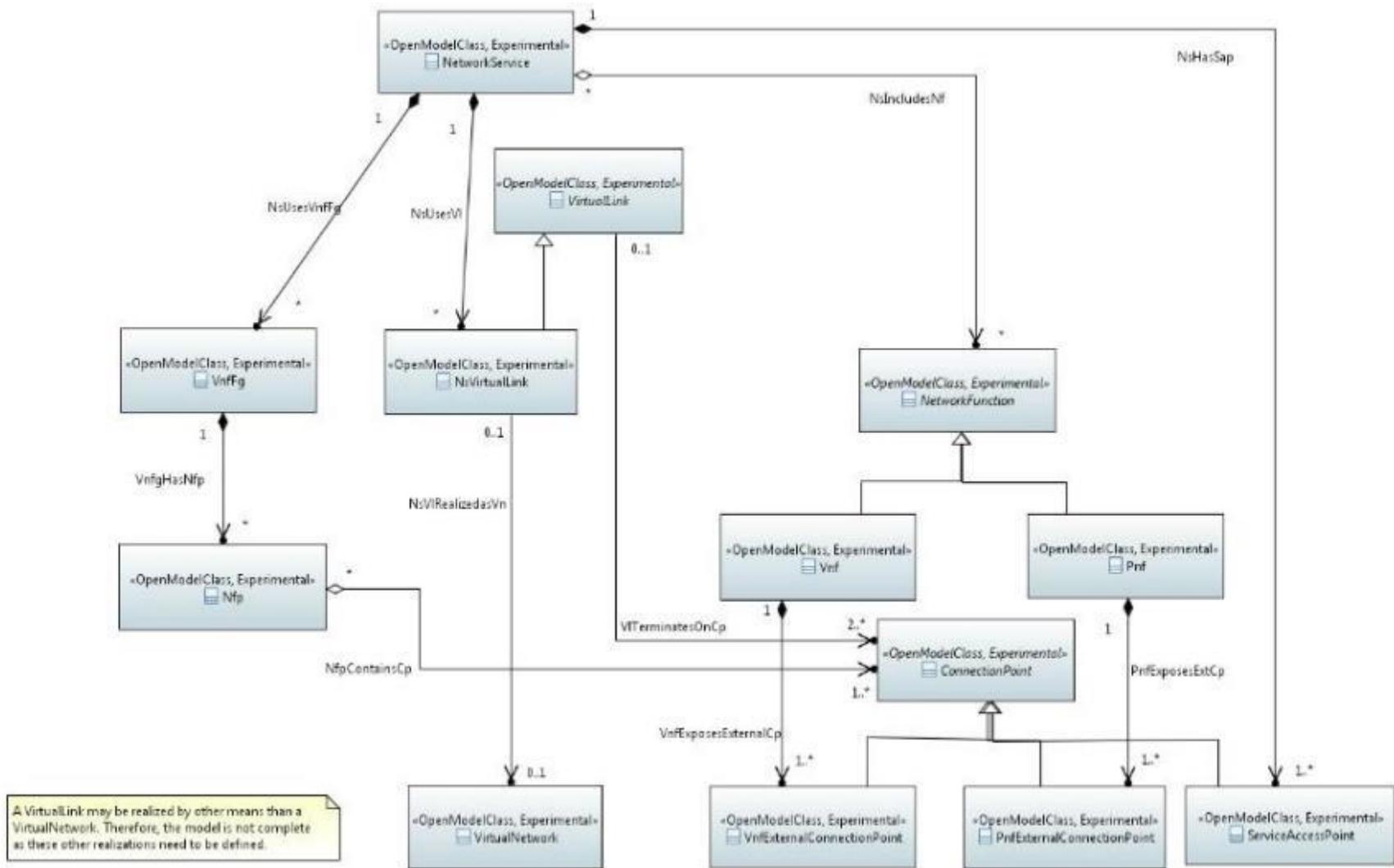
# VNF Logical View



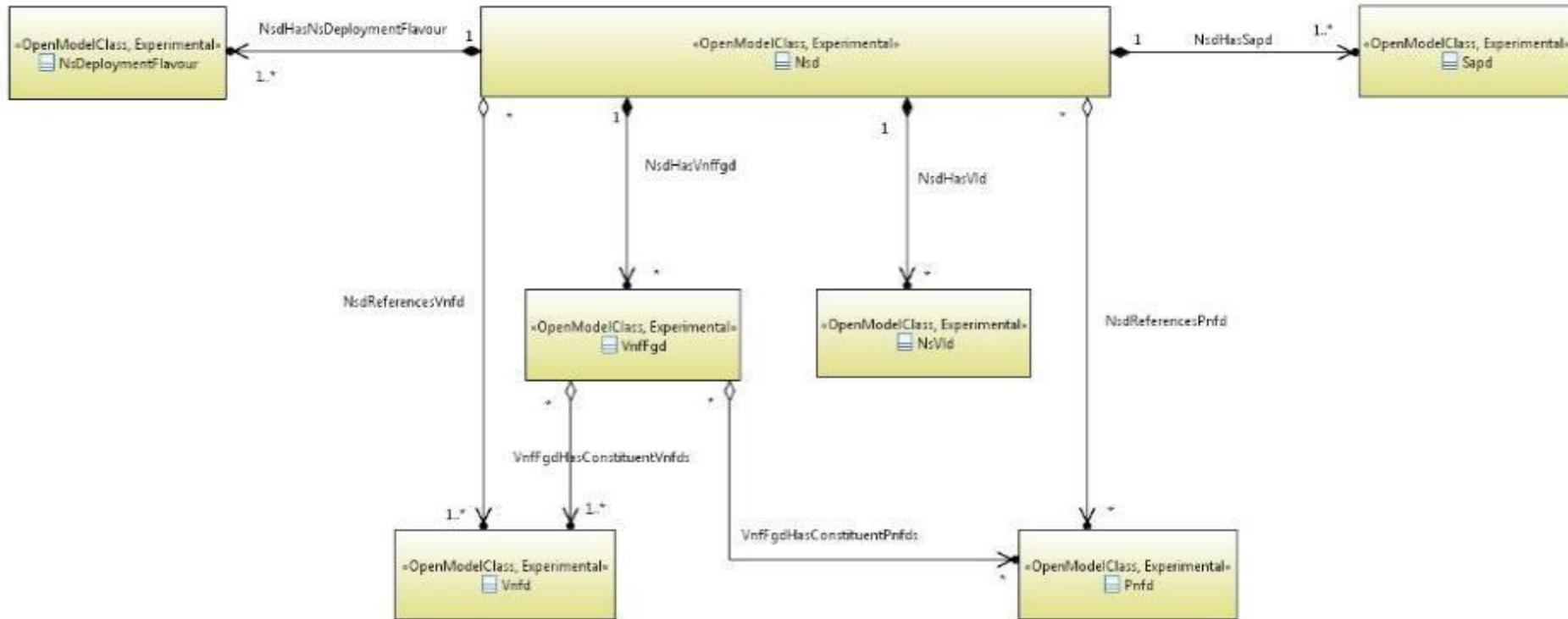
# VNFD Deployment View



# Network Service Logical View



# NSD Deployment View



## 🌐 ETSI NFV Information Model is focusing on the following set of classes:

- Network Service and associated classes (NS, VNF FG, VL, PNF, CP, SAP...)
- VNF and associated classes (VNF, VNFC, CP, VL...)
- Virtual Resource classes (VirtualCompute, VirtualStorage, VirtualNetwork...)
- Associated descriptors (NSD, VNFFGD, VLD, CPD, VNFD, VDU, ...)

## 🌐 ETSI NFV Information Model includes 3 types of view:

- Logical view
- Deployment view
- Application view