

NFV Data Model

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DP2 – Special Project

Purpose of the Project

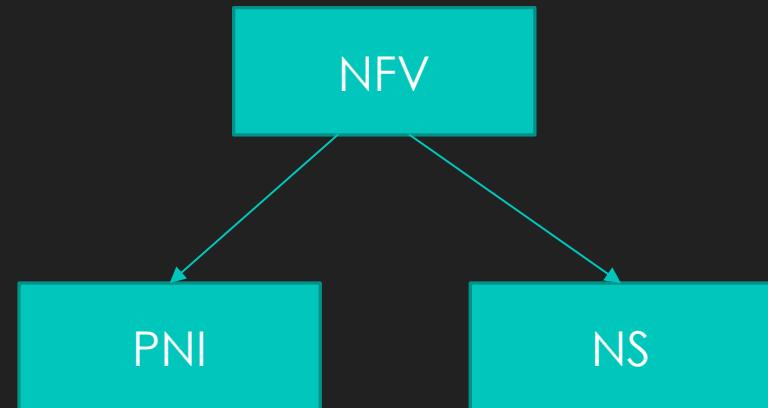
- Data format for the representation of all the most relevant information in the NFV and contexts.
- RESTful web service that permits to store and retrieve the NFV/SDN information.

Model Design: starting point

- Analysed and studied the model of VerifOO/Verigraph
- Study of the most successful standard: ETSI and TOSCA
- Summarized the major difference between ETSI and VerifOO/Verigraph
- Model proposal

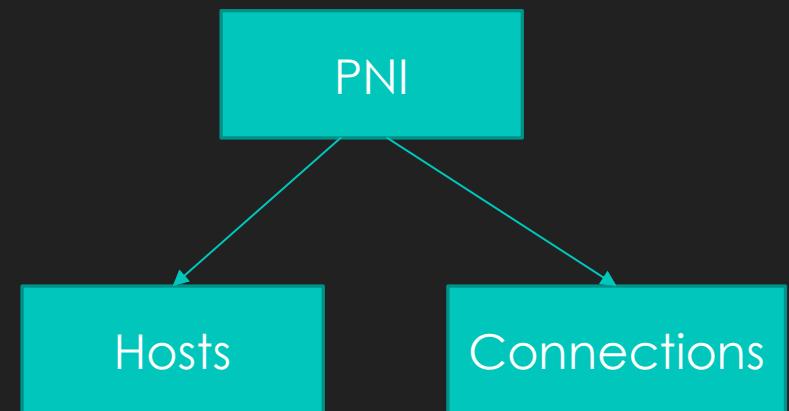
Model Design: the structure

- Two main substructure:
 - PNI: Physical Network Infrastructure
 - NS: Network Service



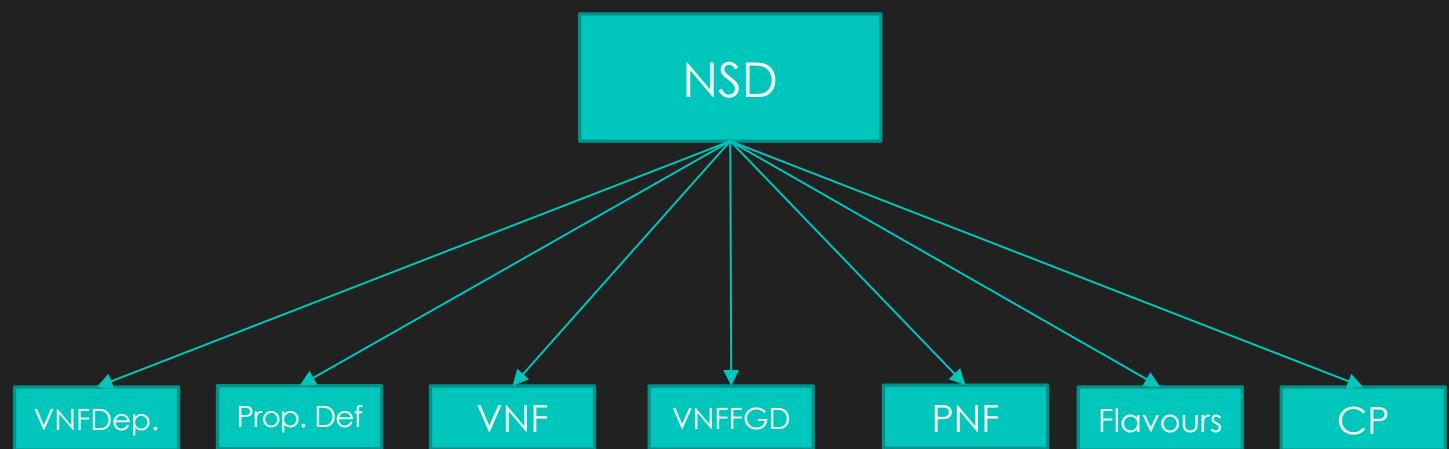
Model Design: PNI main components

- Hosts
- Connections



Model Design: NS main components

- VNF Dependency
- Property Definition
- VNF
- VNFFGD
- PNF
- Flavours
- Connection Point



RESTful web service: overview

- Many methods allow to manage each structure of the model
- GET, POST, DELETE and PUT not only the entire structure of the model but also its subparts

RESTful web service: implementation

- Five different kind of classes
- JAXB: auto-generated from the .xsd schema
- DB: manage insertion, deletion and modification over a specific element
- Resources: define relative methods and paths for that element
- Services: interface between DB and Resources
- A client (acts as a test class) performing many methods for many structures

RESTful web service: demonstration

- Perform some operation through Postman
- Show how the Client class works