



OPEN-O G-VNFM Project Proposal

Version 0.6 Draft – For Review
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Problems to be solved

- **Problem:**

- ✓ The Open-O model will be align to the SDO model and also it has the requirement to extend the SDO model from vendor and SP, such as special EPA parameters, etc. Therefore the Open-O needs a VNFM to deploy the model to the VIM to satisfy these requirements ASAP.
- ✓ Now Open-O needs to integrated with the other VNFM to deploy a simple VNF, and the SP will install the outside VNFM beside the Open-O installation, and will expand the complex.
- ✓ Beside the VNF Software, the VNF vendors need to develop S-VNFM and integrate with NFVO and VIM for on boarding the VNF via Open-O. Especially for some small-scale VNF vendors, S-VNFM is more complex. VNF Resource Allocation is repetitive among them.
- ✓ S-VNFMs or G-VNFMs out of Open-O have their own VNFD model, not based on the VNF information model of Open-O. It is hard to keep integrity of VNFD between NFVO and VNFM.

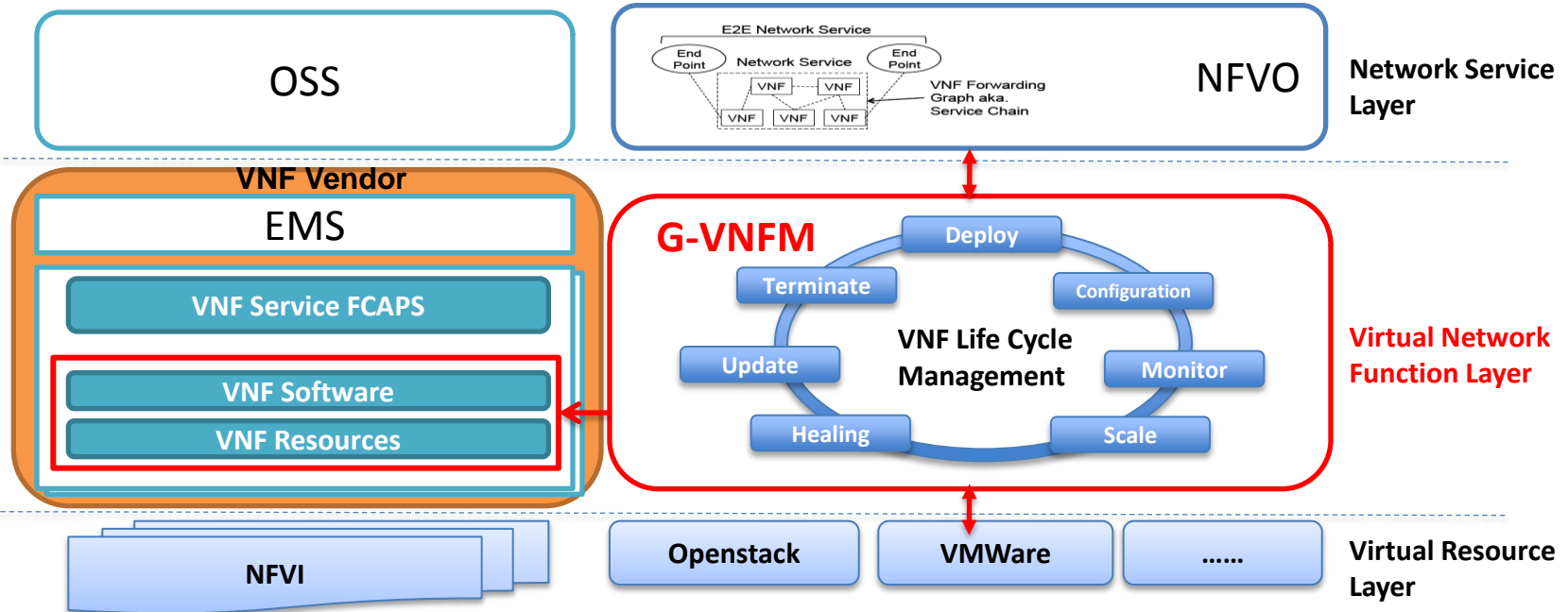
- **Goals:**

- ✓ Provide generic VNF lifecycle management based on the VNF information model of Open-O.
- ✓ Provide the script extension for VNF vendor to satisfy the specific demands.

Overview

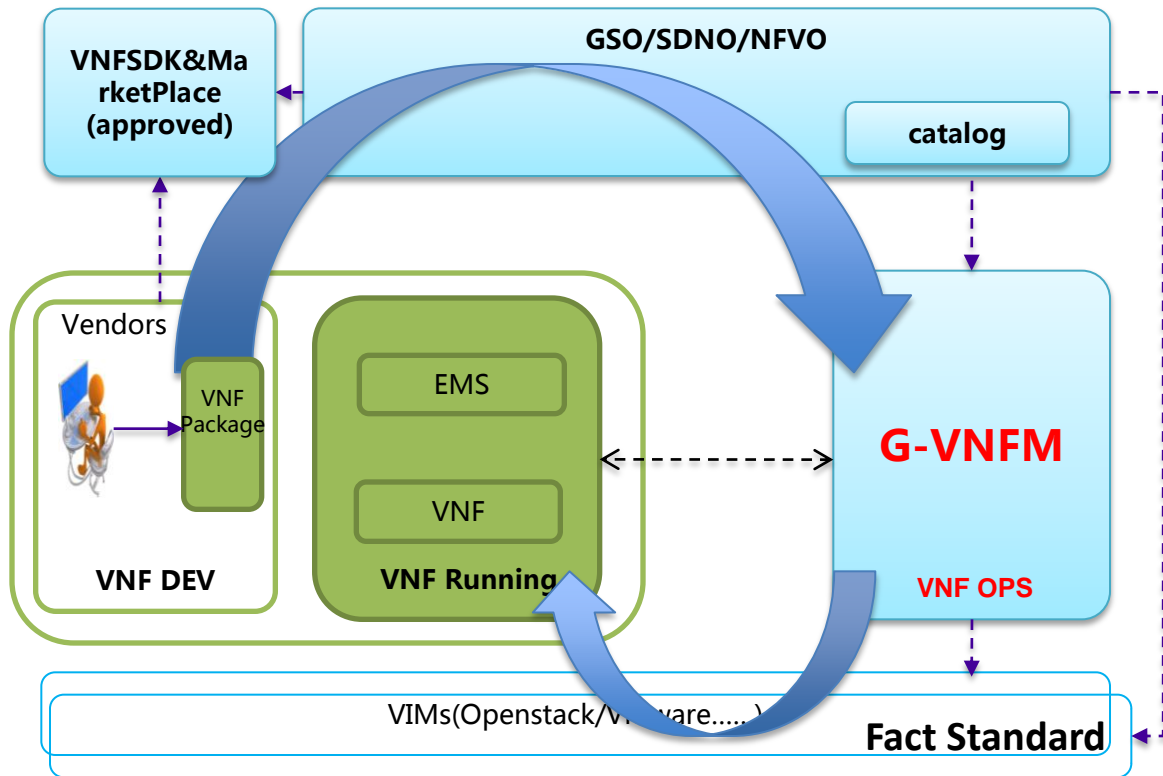
- Project Name: G-VNFM
- Repository Name: gvnfm
- Project Description:
 - ✓ Using ETSI NFV MANO architecture as a reference, and targeted at implementing the G-VNFM Component, that provides the resource management and VNF software management.
 - ✓ Be align to the VNF information model of open-o definition referring SDOs definition in code layer and align to the Or-VNFM interfaces in order to achieve the seamless integration with NFVO project in Open-O.
- Potential Participants:
 - ✓ CMCC, Intel, Gigaspace, HW, ZTE, others

Project Scope



- Support VNF Resource Layer Management, including VNF deploy, monitor, scale, healing, and termination etc.
- Support VNF Software Layer Management, including installation, update/upgrade, configuration, etc.
- Support multiple VNFs and multi-type VNFs from different vendors
- Support multiple VIM environments and multi-type VIM environments based on VM or Docker

G-VNFM Make Open-O more Integrity for VNF Vendors

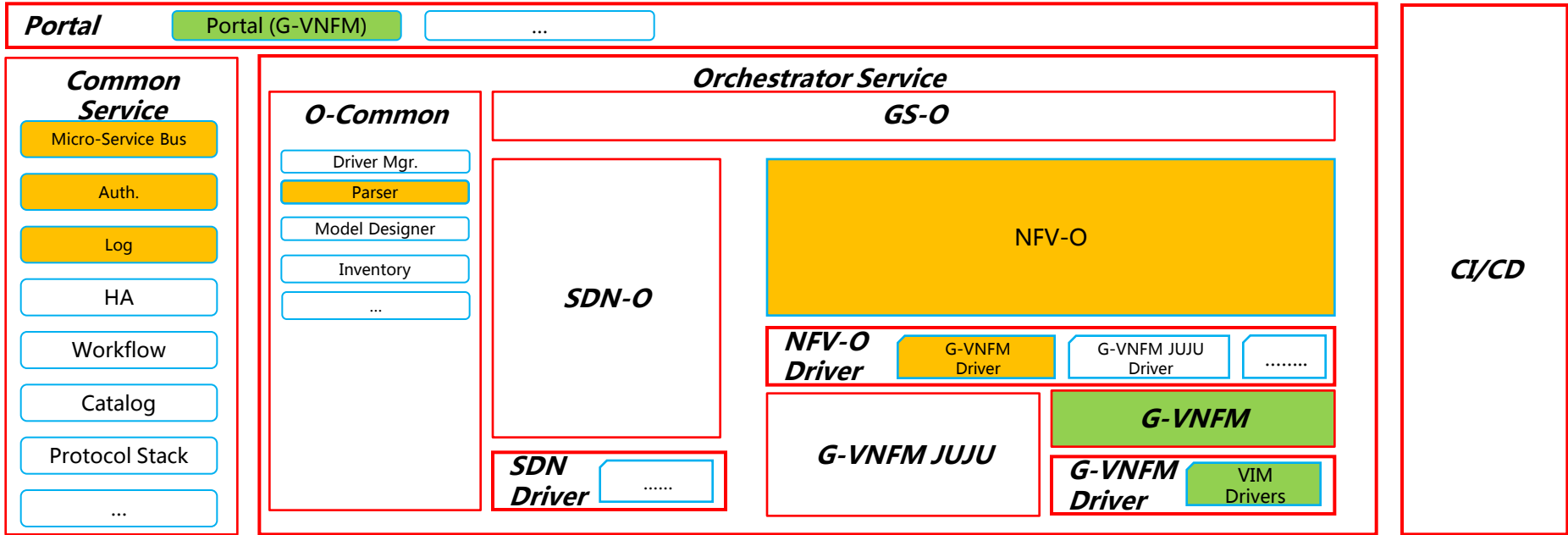


VNF SDK & MarketPlace:
Provide a VNF Market Place and a tool for VNF vendor to build the VNF package.

NFVO:
Provide the VNF Catalog, VNF on-boarding, and invoking VNFLCM.

G-VNFM:
Provide the common VNF lifecycle Management according to OpenO VNFD.

Open-O Architecture Align

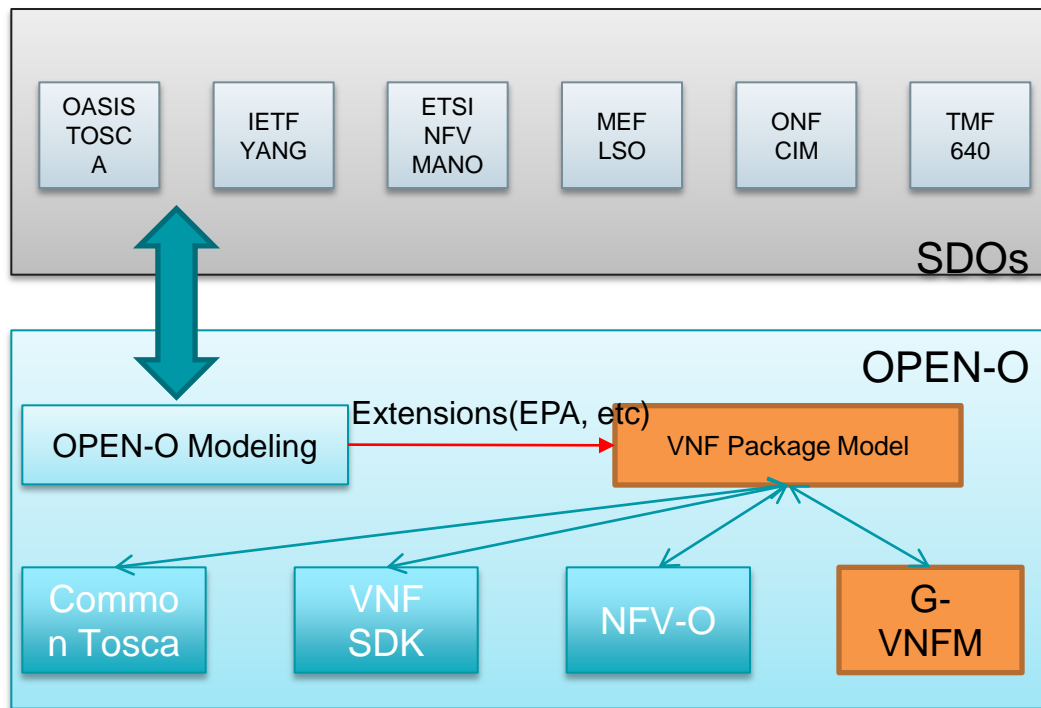


VNF SDK & MarketPlace

Modeling

dependency insope

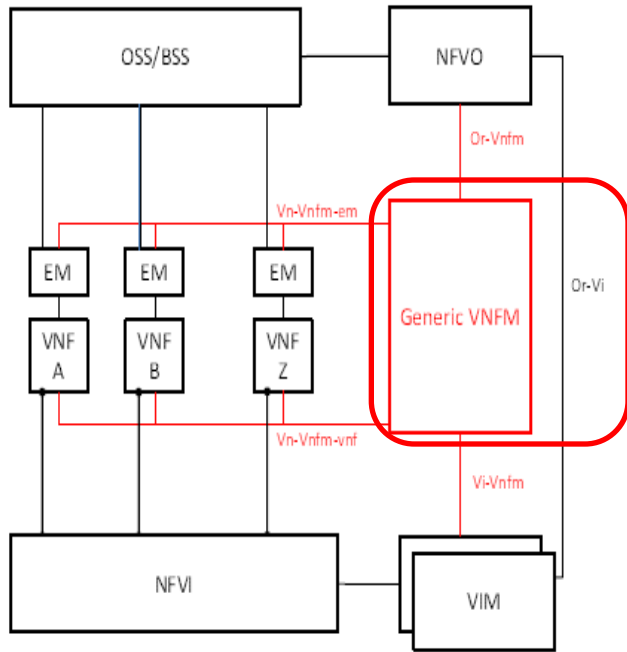
Open-O VNF Information Model Align



- VNF Information Model:
1. Software Images
 2. App Softwares
 3. VNFD (SDO definition and extensions (EPA, etc))
 4. Scripts
 5.

VNF lifecycle is align to design!

ETSI Architecture Align

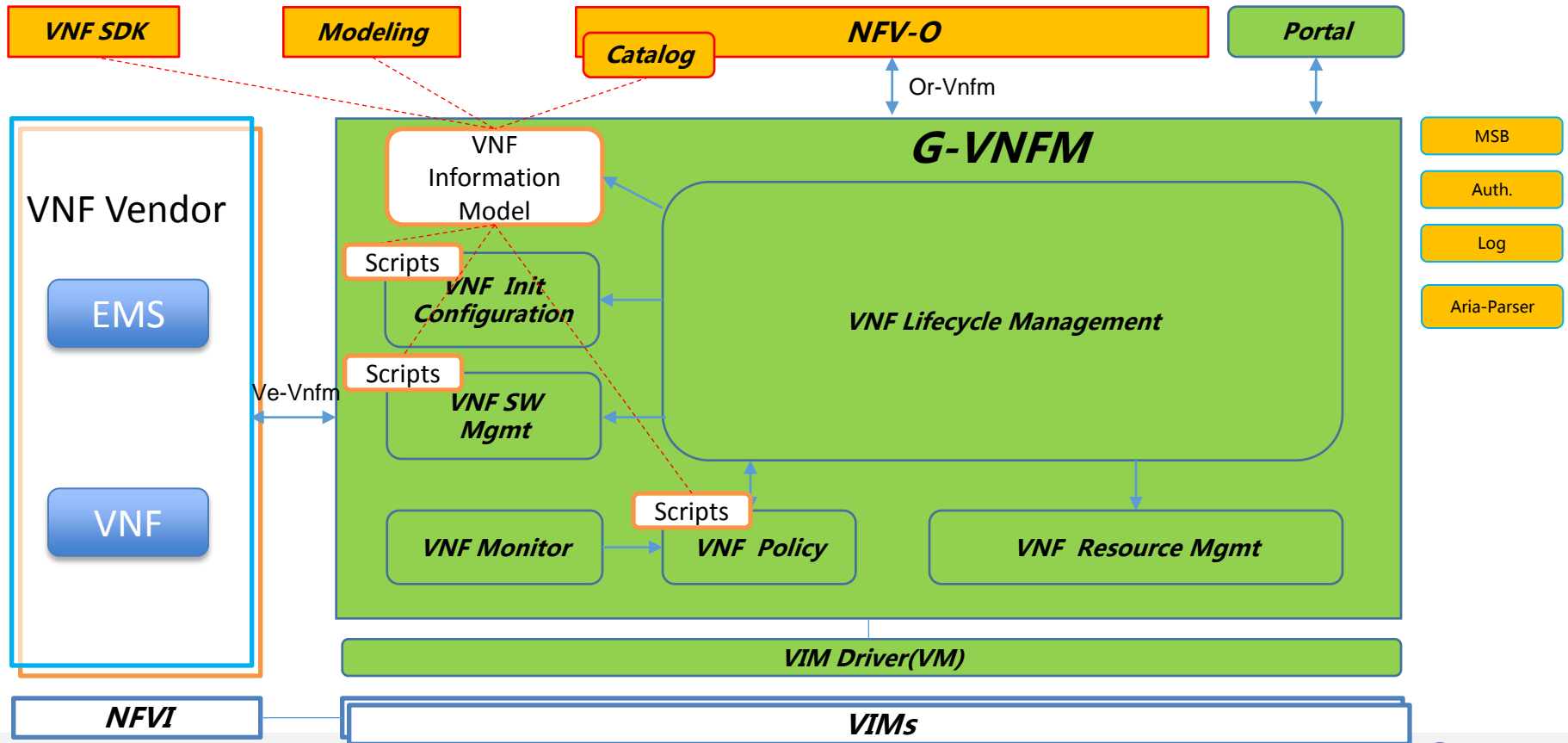


ETSI NFV IFA has published the ve-vnfm interface document, which can be as the reference.

http://www.etsi.org/deliver/etsi_gs/NFV-IFA/001_099/008/02.01.01_60/gs_NFV-IFA008v020101p.pdf

Figure 6.2.1.1-1: Architectural option with a generic VNFM.

G-VNFM Architecture



Resources

- **Contact Person:**
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- **Initial Committers:**
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- **Contributors:**
ZTE: 5 developers
Others

ZTE has the seed code, and welcome other committers and contributors to join us.

- **Plan for R2 release**
 - VNF Deploy
 - VNF Termination
 - VNF Instance Scale Manually
- **Long-term Roadmap**
 - VNF Auto-Scale
 - VNF Monitor
 - Application SW Management&Configuration



谢谢
Thank you