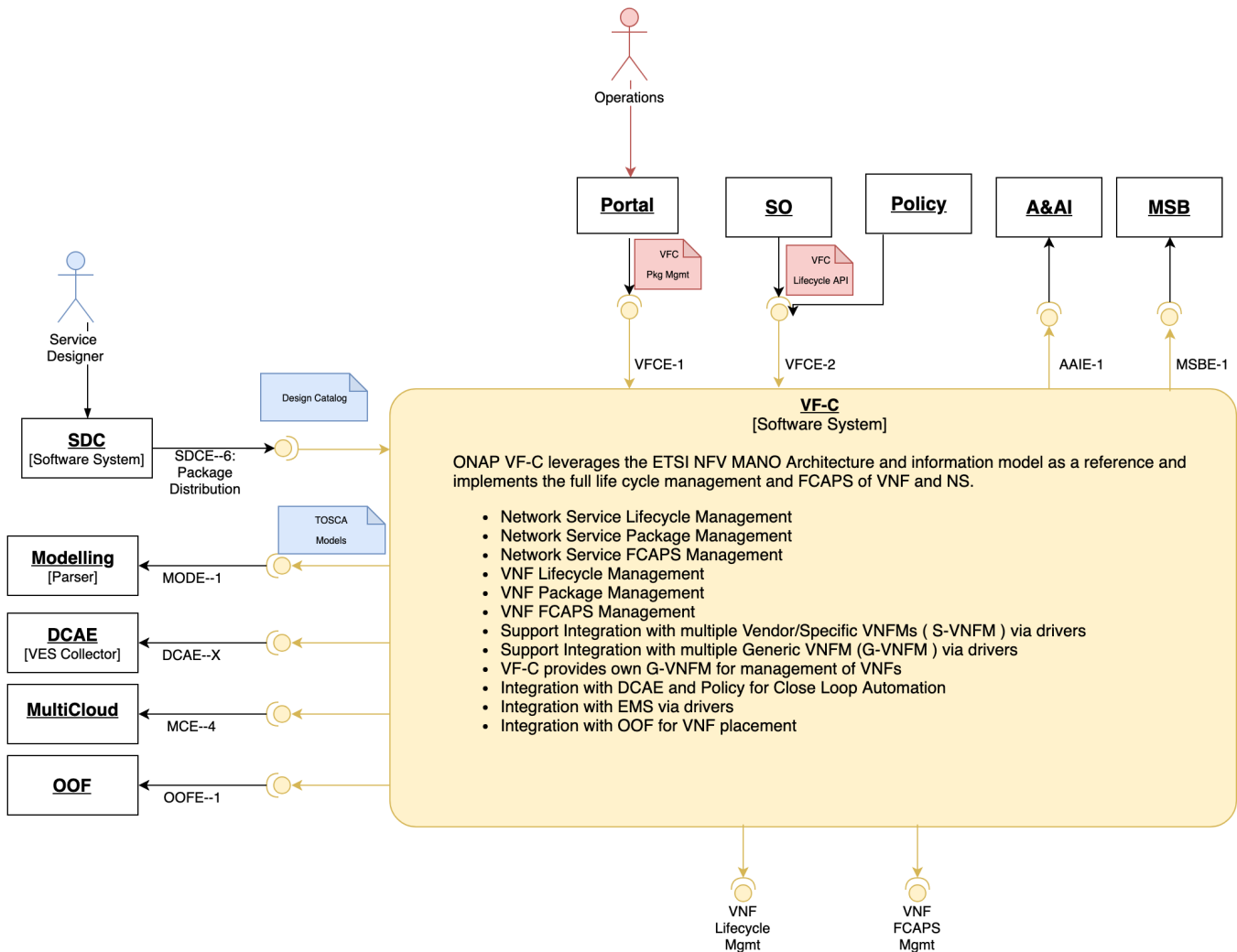


ARC VFC Component Description – Dublin

STATUS: Under Construction

1 High Level Component Definition and Architectural Relationships



ONAP VF-C leverages ETSI NFV MANO architecture and information model as a reference, and implements full life cycle management and FCAPS of VNF and NS.

- support NS and VNF lifecycle management based on ONAP modelling and workflows
- support integration with multiple VNFMs via drivers, which includes vendors/specific VNFM (S-VNFM) and generic VNFM (G-VNFM)
- support integration with multiple VNFs via providing an ONAP generic VNFM (G-VNFM)
- support integration with multiple VIMS via Multi-Cloud, which includes open source and commercial VIMS
- support microservice architecture and model driven resource orchestration and management

2. VFC-C API definitions

VFC provides the following interfaces:

Interface Name	Interface Definition	Interface Capabilities
VFCE-1	Portal/OSS Interface	An interface to allow for NSD and VNF Package Management
VFCE-2	Service Orchestrator / Policy Interface	An interface to allow Service Orchestrator and Policy request NS Lifecycle Management (ETSI SOL-005)

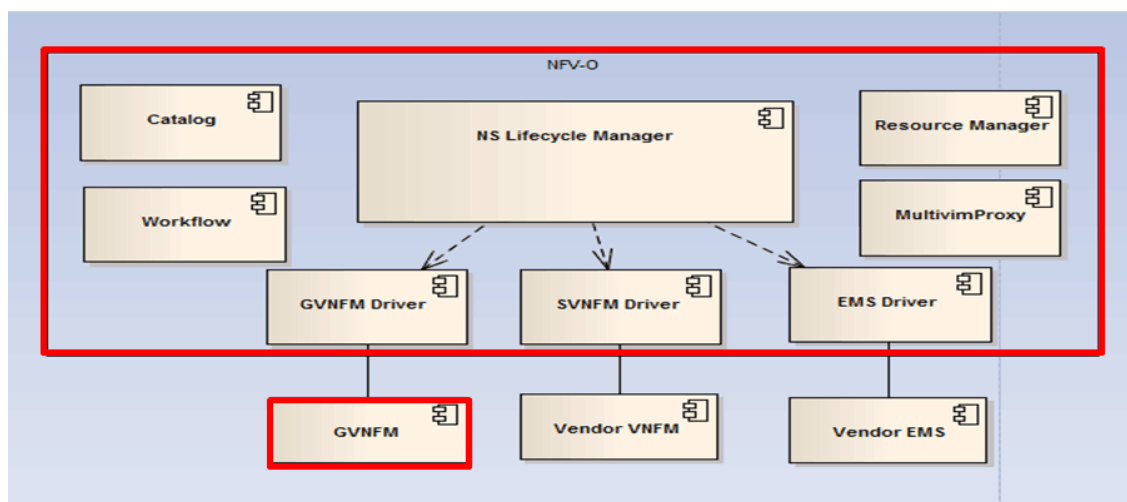
The current VFC API documents can be found at:

<https://docs.onap.org/en/latest/submodules/vfc/nfvo/lcm.git/docs/platform/APIs/index.html>

VFC consumes the following interfaces:

Interface Name	Interface Definition	Interface Capabilities
SDCE-6	SDC Interface	An interface to receive resource Templates from SDC design catalog
AAIE-1	Inventory Service Interface	An interface to create, update, query, and delete resource information and relationships
MSBE-1	Micro Service Bus Interface	An interface for registration and discovery with the ONAP Micro Service Bus.
MODE-1	Modelling Tosca Parser Interface	An interface for the Tosca Parser from Modelling project to parse the NS and VNF Descriptors.
MCE-6	MultiCloud Interface	An interface for Virtual Network Resource Management and Vim assignment
DCAE-1	DCAE Interface	An interface to share FM/PM data for VNF FCAPS from the VNFs via the EMS Driver to VES Collector
OOF-1	OOF Interface	An interface to get the VNF placement

3. Component Description:



This shows all VF-C components, where each component is a standalone microservice. These microservices include:

- Network Service Lifecycle Manager (nslcm) which is the core component of VF-C NFVO, mainly responsible for network service management.
- Catalog is used for package management, including NS/VNF/PNF package management.
- Resource Manager is used for the management of the instances that are created by VF-C and is also responsible for resource granting operations.

- Specific Virtualised Network Function Manager (S-VNFM) Driver. VF-C currently has three vendor's Specific VNFM drivers, including Nokia, Huawei, ZTE drivers, where each driver is a microservice.
- Generic Virtualised Network Function Manager (G-VNFM) Drivers. VF-C can now have two generic VNFM drivers, the gvnfm driver and juju vnfm driver.
- Workflow is comprised of 2 microservices, the vfc-workflow that provides the workflow management services and the vfc-workflow-engine which is the activiti workflow engine microservice.
- Multivim-proxy, provide interfaces to forward virtual resource requests to MultiCloud for resource checking (Vim Assignment) and Network resource creation.
- EMS Driver is used for VNF performance and alarm data collection and report to DCAE via the VES collector.
- GVNFM provides the ONAP Generic Virtualised Network Function Manager capabilities. GVNFM is composed of three microservices: vfc-vnflcm, vfc-vnfmgr and vfc-vnfres. The core microservice vfc-vnflcm is responsible for VNF life cycle management.

4. known system limitations

- to be filled in based on Dublin release notes

5. Used Models

VFC use the following models:

- TOSCA - VNF Descriptor ETSI NFV SOL001 v 0.6.0, NS Descriptor ETSI NFV IFA014 v2.4.1

6. System Deployment Architecture

VFC consists of 16 container microservices:

- vfc-nslcm - Network Service Lifecycle Management microservice
- vfc-catalog - The Catalog microservice
- vfc-resmgr - The Resource Manager microservice
- vfc-workflow - The Workflow Manager microservice
- vfc-workflow-engine - The activiti workflow engine microservice
- vfc-generic-vnfm-driver - The G-VNFM driver
- vfc-juju-vnfm-driver - The juju G-VNFM driver
- vfc-huawei-vnfm-driver - The Huawei S-VNFM driver
- vfc-zte-vnfm-driver - The ZTE S-VNFM driver
- vfc-nokia-vnfm-driver/vfc-nokia-v2vnfm-driver - The Nokia S-VNFM driver (current 2 versions)
- vfc-multivim-proxy - The microservice for interfacing with MultiCloud project
- vfc-ems-driver - The Element Management System interfaces
- vfc-db - The VF-C DB service
- vfc-vnflcm - The G-VNFM VNF Lifecycle Management microservice
- vfc-vnfmgr - The G-VNFM VNF Manager microservice
- vfc-vnfres - The G-VNFM resource management microservice

