Introducing Open Platform for NFV

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LINUX FOUNDATION
COLLABORATIVE PROJECTS

OPNFV is a carrier-grade, integrated, open source reference platform for NFV

OPNFV Project Goals

- Develop an **integrated and tested open source platform** that can be used to **build NFV functionality, accelerating the introduction of new products and services**
- Include **participation of leading end users** to validate OPNFV meets the needs of user community
- **Contribute to and participate in relevant open source projects** that will be leveraged in the OPNFV platform; ensure consistency, performance and interoperability among open source components
- **Establish an ecosystem for NFV solutions** based on open standards and software
- Promote OPNFV as the preferred open reference platform

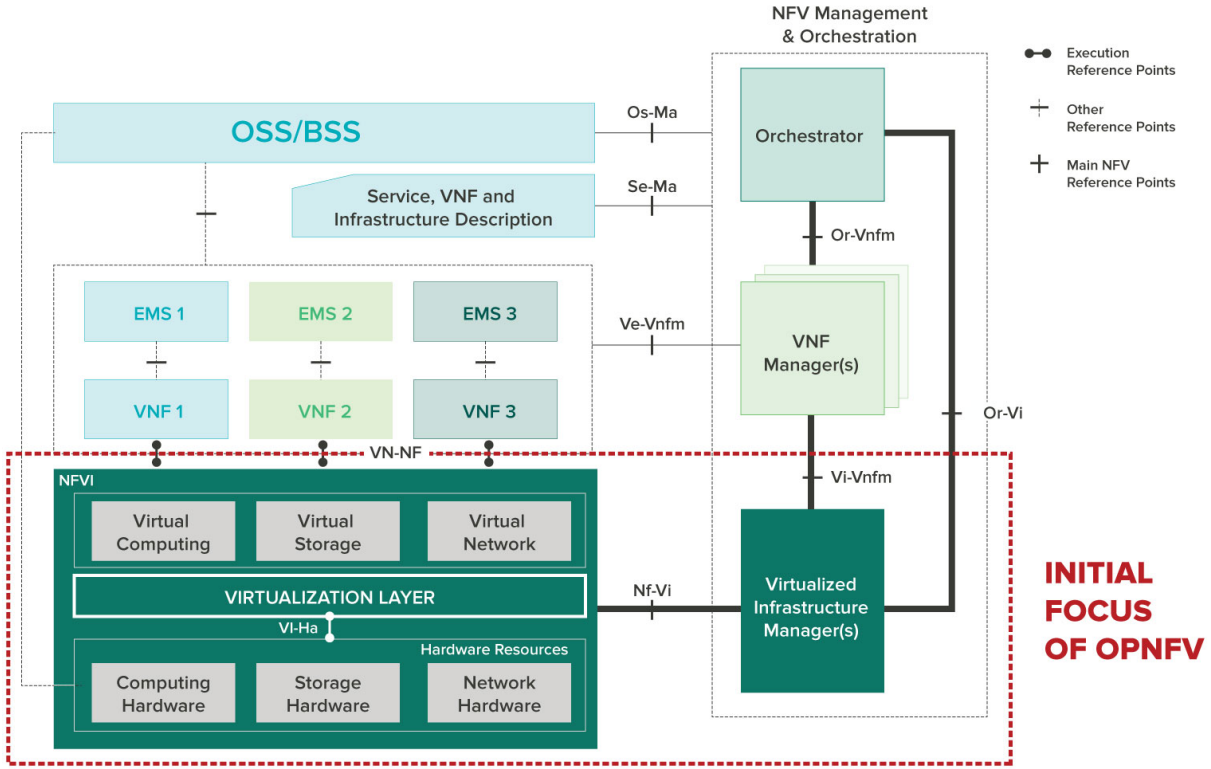
OPNFV Initial Scope

To provide

- NFV Infrastructure (NFVI)
- Virtualized Infrastructure Management (VIM)
- APIs to other NFV elements

which together form the basic infrastructure required for Virtualized Network Functions (VNFs) and Management and Network Orchestration (MANO) components.

OPNFV Architecture Framework

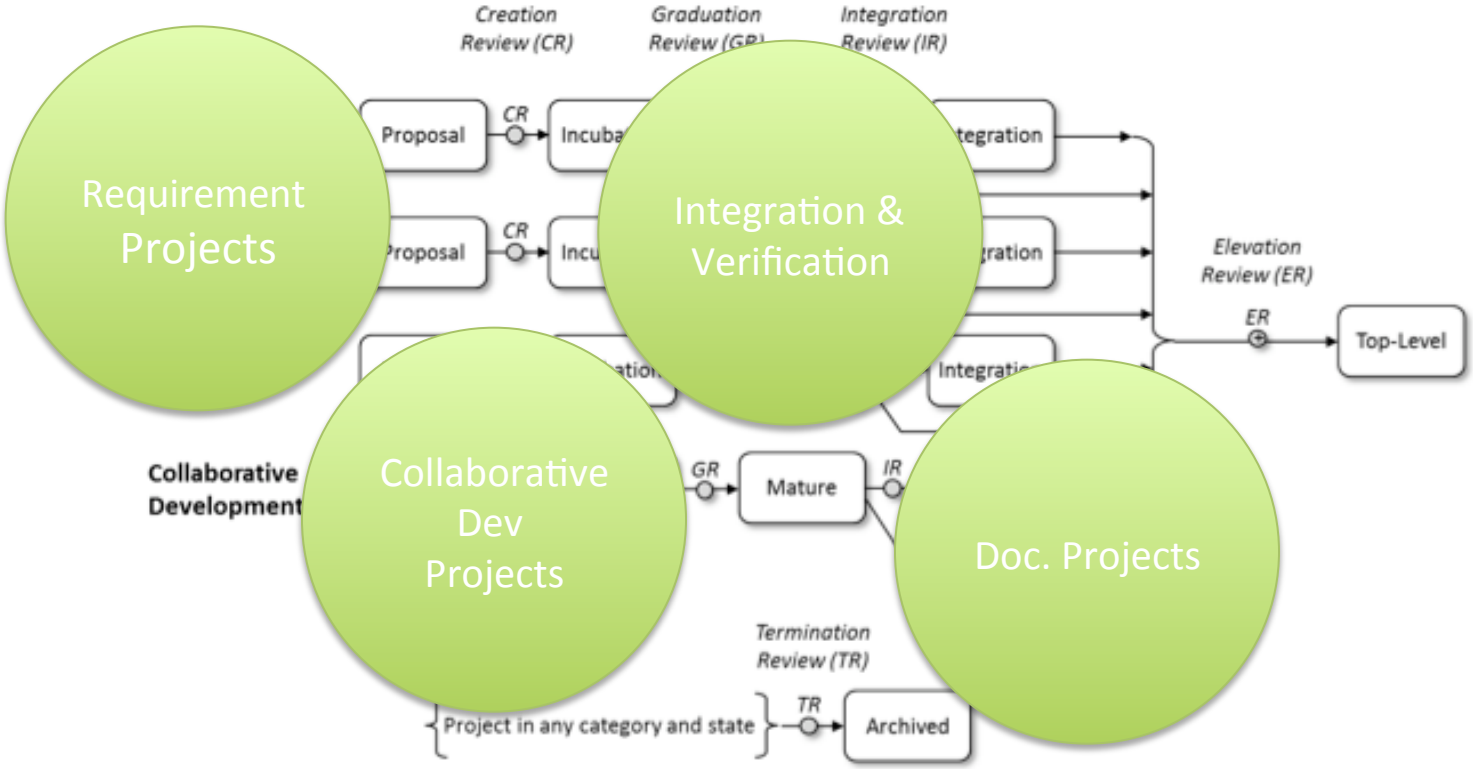


Upstream OSS Projects Integration

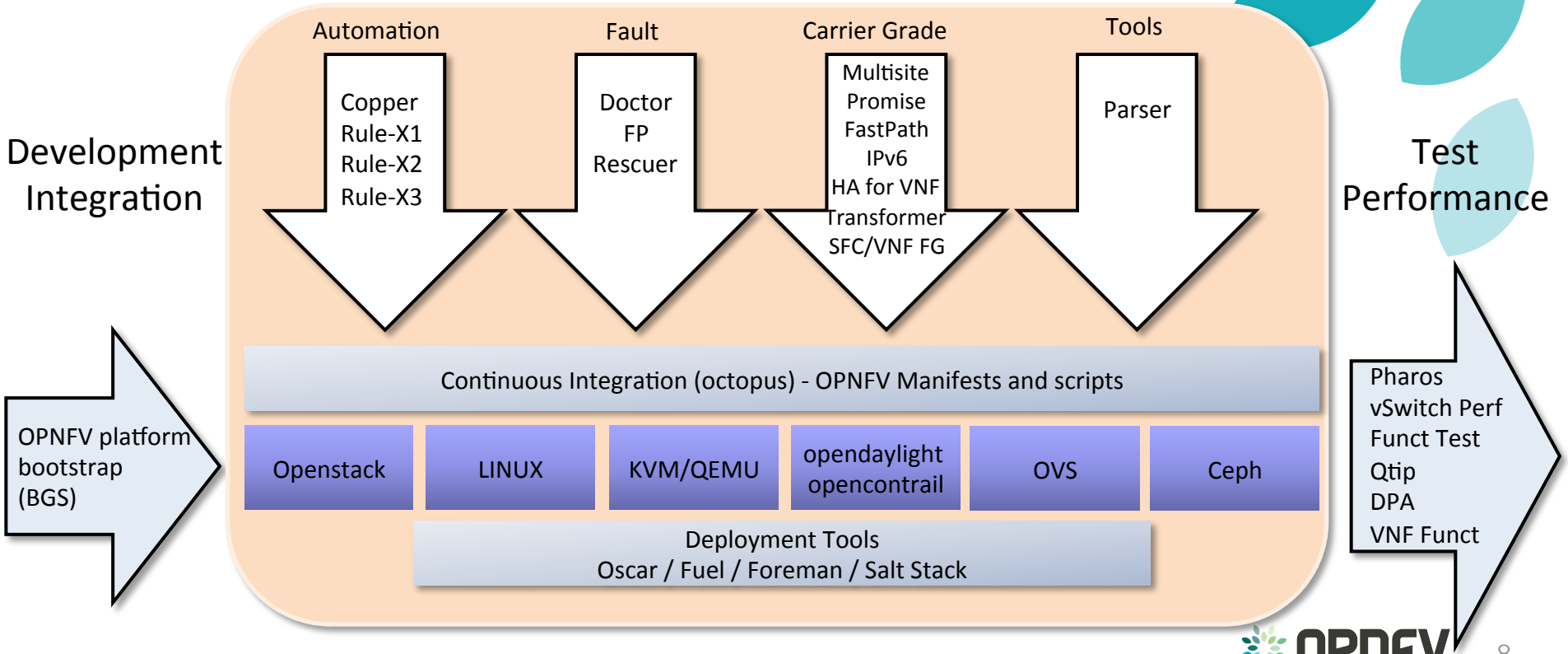
- Work directly with upstream standards bodies (ETSI and others)
- Work directly with upstream open source projects (OpenDaylight, OpenStack, KVM and Xen, and many others)
- Leverage existing codebases
- Integrate existing open source components
- Identify gaps to create new code
- Provide a point of integration, testing and performance optimization

Goal: Best reference platform for carrier-grade NFV implementations

OPNFV Projects & lifecycle



Project Overview



OPNFV Projects -- https://wiki.opnfv.org/

Requirements	Integration & Testing	Collaborative Development	Documentation
Fault Management (Doctor)	Continuous Integration (Octopus)	Software Fastpath Service Quality Metrics	
Virtualized Infrastructure Deployment Policies (Copper)	Bootstrap/Get-started (BGS)		
Resource Management (Promise)	IPv6-enabled OPNFV		
High Availability for OPNFV	Characterize vSwitch Performance for Telco NFV Use Cases		
Data Plane Acceleration (DPACC)	OPNFV System Configuration And Reporting (OSCAR)		
OpenStack based VNF Forwarding Graph	Testbed infrastructure (Pharos)		
Data Collection for Failure Prediction	Base system functionality testing (FuncTest)		
Resource Scheduler	Platform Performance Benchmarking (Qtip)		
	Deployment Template Translation (Parser)		

Doctor Project on Fault Management
https://wiki.opnfv.org/doctor

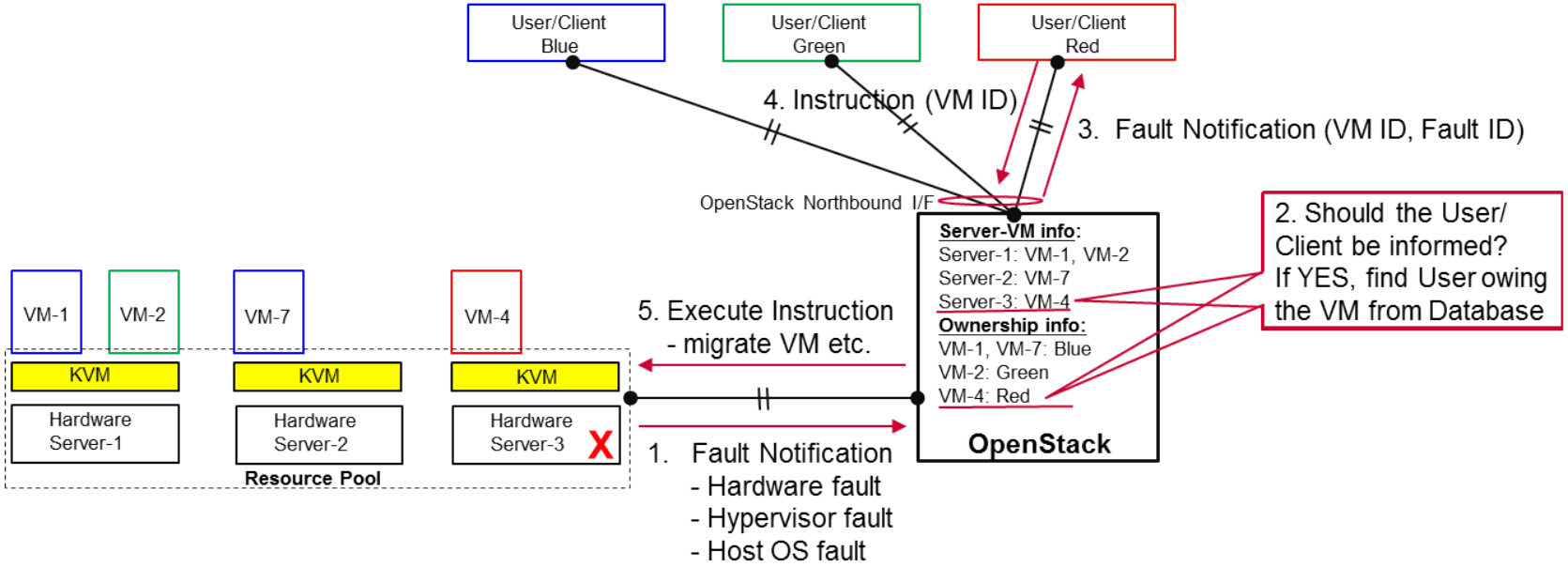
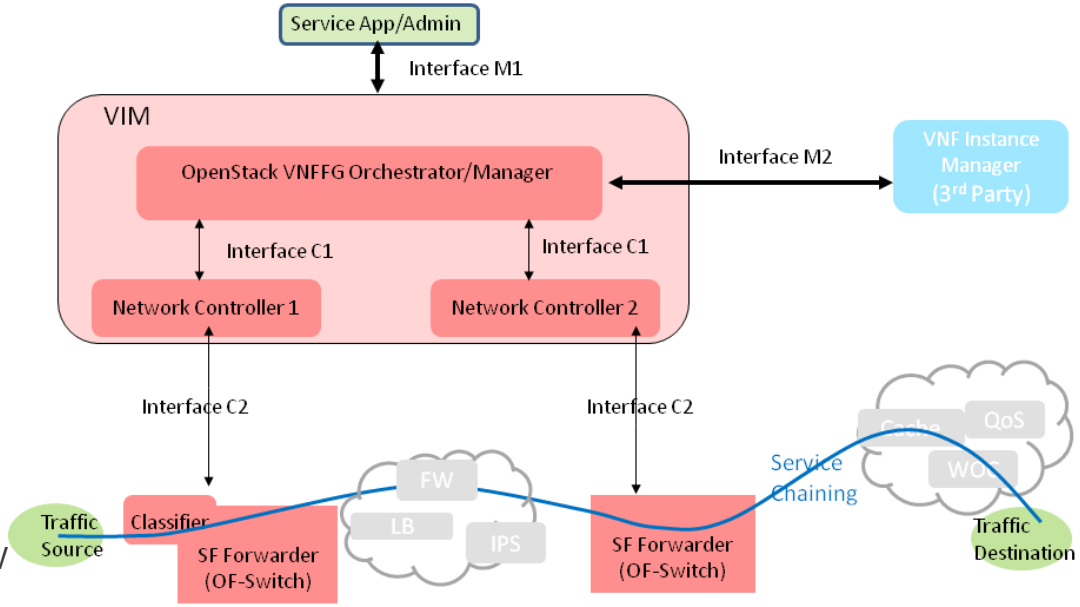


Fig. 1: Steps in Fault Management

OpenStack Based VNF Forwarding Graph Project

https://wiki.opnfv.org/requirements_projects/openstack_based_vnf_forwarding_graph

- Service Chaining based on ETSI VNF Forwarding Graph architecture
- Leveraging OpenFlow Service Chaining
- Selected features
  - VNF Instance and VNF Template registration (on-boarding) and management
  - Intent based specification of a tenant's flow and its associated service function requirement/ intention
  - OpenStack based and OpenFlow compliant VNFFG setup



Release 1 “Arno” – April 23 2015

- OS Juno
- ODL Helium (Neutron ML2-OVSDB proxy)
- Ceph orchestrated by Cinder
- OVS
- CentOS 7.0 (if possible) or Ubuntu 14.04
- Automated deployment, testing

- wiki.opnfv.org/releases

Thank You…

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