

# Fraser Release Key Updates

Project	PTL	Key Features	Key Benefits	Additional Links
		What is new in your project for Fraser as compared to Euphrates?	How will these enhancements / features / bug fixes help users?	Are there any additional links / videos / presentation?
ArmBand	<a href="#">Bob Monkman</a>	<ul style="list-style-type: none"> <li>DPDK integration</li> <li>All Fuel@OPNFV key features also apply</li> </ul>	<ul style="list-style-type: none"> <li>See Fuel@OPNFV key benefits</li> </ul>	
Apex	<a href="#">Tim Rozet</a>	<ul style="list-style-type: none"> <li>Default OpenStack Pike support with ODL Nitrogen</li> <li>Ability to deploy from raw upstream OpenStack along with including any patches in OpenStack Gerrit on the fly, and deploy with containers for OS master/queens (experimental)</li> <li>Improved Apex utility to allow single command to collect all logs from Overcloud nodes to help debug failures.</li> <li>SR-IOV support (experimental)</li> <li>Continued Apex code refactoring into Python</li> </ul>	<ul style="list-style-type: none"> <li>Ability to deploy both OPNFV tested artifacts as well as upstream deployments using the latest OpenStack branches.</li> <li>Improved user experience with better code stability and automatic log collection for filing bugs.</li> </ul>	
Daisy4NFV	<a href="#">Zhijiang Hu</a>	<ul style="list-style-type: none"> <li>OpenStack Pike support</li> <li>Support 3 Nodes ODL cluster</li> <li>New ovs_dpdk scenario with both external and VxLAN tunnel network accelerated</li> <li>Integrates with Doctor and YardStick</li> <li>Support Ceilometer+Gnocchi+Aodh</li> </ul>	User now can try containerized ODL cluster and containerized OVS+DPDK solution.	
Parser	<a href="#">xiaodong shang</a>	<ul style="list-style-type: none"> <li>Support arm environment</li> <li>Publish nfv-toscaparser for ONAP community</li> </ul>	ONAP use nfv-toscaparser as service template parser	
QTIP	<a href="#">zhihui wu</a>	<ul style="list-style-type: none"> <li>Compute test support for VM</li> </ul>	Users can get a compute QPI for VM	
IPv6	<a href="#">Bin Hu</a>	<ul style="list-style-type: none"> <li>OpenStack Pike</li> <li>ODL Nitrogen</li> <li>IPv6 Cluster Support</li> <li>Exploration of IPv6 in container networking (e.g. simple topology and solution for IPv6 with Docker)</li> </ul>	<ul style="list-style-type: none"> <li>Simplified network configuration</li> <li>Evolving IPv6 towards containerized infrastructure</li> </ul>	
Functest	<a href="#">Cedric Ollivier</a>	<ul style="list-style-type: none"> <li>add 7 test cases: neutron_trunk, patrol, juju_epc, k8s_smoke, k8s_conformance, stor4nfv and clover</li> <li>update test cases and containers to OpenStack Pike</li> <li>move the framework into a separate project: Xtesting</li> <li>ease running all containers thanks to default values</li> <li>clean interfaces with OPNFV Installers and Features</li> <li>rewrite all vnfs to allow multiple tests in parallel</li> <li>fully support non-default region names and Keystone v3 domains</li> <li>refactor all tempest-based test cases (e.g. refstack_defcore)</li> <li>remove obsolete OpenStack and Functest utils</li> <li>verify all changes via doc8 and yamllint too</li> <li>generate reports for all tempest-based test cases</li> </ul>	<ul style="list-style-type: none"> <li>the enduser can run all tests by setting only one input (EXTERNAL_NETWORK)</li> <li>the developer can only work on the test suites without diving into CI/CD integration</li> <li>both OpenStack and Kubernetes deployments can be verified</li> <li>Functest test cases are trustable as they meet the best coding rules (unit tests, coverage, linters, etc.)</li> <li>Functest can be reused in other projects (e.g. ONAP)</li> </ul>	<ul style="list-style-type: none"> <li><a href="#">ONS: Re-using OPNFV framework tests for LFN projects</a></li> <li><a href="#">Xtesting</a></li> </ul>
Doctor	<a href="#">Tomi Juvonen</a>	<ul style="list-style-type: none"> <li>Vitrage support for local installer.</li> <li>Support for MCP and Daisy installers.</li> <li>Maintenance test case work started.</li> </ul>	User now can try Vitrage, pickup their favorite installer or seek into how infrastructure maintenance for NFV can be done.	<a href="#">Infrastructure Maintenance &amp; Upgrade: Zero VNF Downtime with OPNFV Doctor on OCP Hardware</a>

Compass4 NFV	Justin chi	<ul style="list-style-type: none"> <li>OpenStack Pike support</li> <li>K8s 1.9/1.74 support</li> <li>New scenarios: <ul style="list-style-type: none"> <li>a. odl-sfc</li> <li>b. Barometer</li> <li>c. stor4nfv</li> <li>d. k8s-multus</li> <li>e. k8s-sriov-cni</li> </ul> </li> </ul>	<p>Users can not only deploy OpenStack, but also try K8s on X86/ARM via Compass.</p> <p>Users can start sfc via opendaylight, barometer, open-sds and K8s enhanced network features from Fraser.</p>	
High Availability	Qiao Fu	New test cases for VM HA, Hypervisor HA, SDN HA, and other key services HA in OpenStack	Enhanced High availability testing for OPNFV	Need follow-up
Yardstick	Ross Brattain	<ol style="list-style-type: none"> <li>k8s based test cases tc080 and tc081</li> <li>More HA test cases from HA projects</li> <li>Plugin-based test cases support Heat context</li> <li>Support using existing network</li> <li>Improvements to unit tests and gating</li> <li>GUI improvement about passing parameters</li> <li>SR-IOV support for the Heat context</li> <li>Support running test cases with existing VNFs/without destroying VNF in Heat context</li> <li>Add vFW scale-up template</li> </ol>	<ol style="list-style-type: none"> <li>Ping between containers base on k8s</li> <li>Support plugin test cases via python projects</li> <li>Support using existing network in the SUT via Heat</li> <li>User can pass config the test case via parameters</li> </ol>	
StorPerf	Mark Beierl	<ol style="list-style-type: none"> <li>Switched to SNAPS for OpenStack communication</li> </ol>		
Pharos	Julien	<ol style="list-style-type: none"> <li>LaaS has been achieved including ARM and X86 servers</li> <li>Book resources provided by LaaS in pharos dashboard(<a href="https://labs.opnfv.org">https://labs.opnfv.org</a>)</li> <li>Pharos Spec 1.0 for physical released. It's opener(moving from secured repo to pharos) and securer(supporting eyaml for encryption data)</li> <li>All installers support PDF Spec 1.0 (double check) while in Euphrates, only 2.</li> </ol>	<ol style="list-style-type: none"> <li>Reserver servers for development or trying OPNFV through LaaS</li> <li>Make sure your lab is supported and compatible with OPNFV</li> </ol>	
VSPerf	Sridhar Rao	<ol style="list-style-type: none"> <li>3 Additional tools support: Collectd, Intel-RMD and stressor/noisy-VMs.</li> <li>Newer versions of OVS and VPPs</li> <li>Better common line configuration ability.</li> <li>Enhanced T-Rex support - testcases, optimizations, feature-additions, etc.</li> <li>Newer tests - Traffic Capture, OVS-DPDK regression, TRex-As-VM.</li> <li>Better platform support: SLES15 is also supported now.</li> <li>Specifications: long-duration soak tests.</li> <li>Latest Pylint conformance.</li> <li>Python Virtenv moved to Python-3.</li> <li>Many minor enhancement and bug-fixes.</li> </ol>		
Barometer	Aaron Smith	<ul style="list-style-type: none"> <li>Collectd reference container</li> <li>Added ansible scripts for configuration and deployment</li> <li>Added collectd 5.8 new plugins and updates (DPDK stats/events, mcelog, Intel RDT, Hugepages, IPMI, OVS stats /events, SNMP agent, virt, INtel PMU)</li> </ul>	<ul style="list-style-type: none"> <li>Collectd is now easier to deploy and configure in OPNFV</li> <li>New platform metrics are available</li> </ul>	Barometer: Taking the pressure off of assurance and resource contention scenarios for NFVI
Releng	Fatih Degirmenci	<p>Amar From JIRA:</p> <ul style="list-style-type: none"> <li>Automate Stable Branch Job Creation</li> </ul>		
JOID	Narinder Gupta			
SFC	Manuel Buil	<ul style="list-style-type: none"> <li>New testcase for symmetric chains</li> <li>Support for latest OpenDaylight release ==&gt; ODL Oxygen</li> <li>Supporting latest Tacker TOSCA vnfvg descriptor</li> <li>Migrated to SNAPs-OO for openstack related calls</li> <li>Reduced footprint of SF image</li> <li>Support for opensuse OS</li> </ul>	<ul style="list-style-type: none"> <li>SFC is now capable of providing quick feedback to the upstream projects on latest versions</li> <li>Faster testing of SFC scenario</li> <li>SFC scenarios successfully tested in opensuse, centos and ubuntu</li> </ul>	

Bottlenecks	Yang (Gabriel) Yu	<ul style="list-style-type: none"> <li>• Testcase for multi-stack storage testing</li> <li>• Testcase for long duration data-plane testing</li> <li>• Testcase for security testing using Moon</li> <li>• Refactoring testing framework for offline testing</li> <li>• New monitoring dashboard supporting folded lines</li> </ul>	<ul style="list-style-type: none"> <li>• Support compute, storage and network stress testing while monitoring system behaviors for end user and developers</li> <li>• Support security authentication tests for multi-cloud</li> <li>• More concise and aggregated monitoring results for fast positioning issues</li> </ul>	Need follow-up
Fuel	TBD	<ul style="list-style-type: none"> <li>• Openstack Pike, OpenDaylight Oxygen</li> <li>• New OVN based scenario</li> <li>• PDF/IDF integration improvements, input validation</li> <li>• Lab proxy support</li> <li>• Full parameterization of cluster IPs and netmasks (where applicable) via IDF</li> <li>• Support for deployments without a virtualized control plane (experimental)</li> <li>• Major documentation improvements</li> <li>• Jumpserver prerequisites validation</li> <li>• Optimized MCP underlying tools</li> <li>• Neutron trunk ports support</li> <li>• Cinder storage on physical disks (was loop)</li> <li>• Retpoline/kpti handling for performance improvements</li> <li>• Retire legacy parameteres in favor of PDF/IDF alternatives</li> </ul>	<ul style="list-style-type: none"> <li>• Even faster deploys (virtual x86 noha takes less than 30 minutes), great for development work and trying out new features</li> <li>• Lots of automatic checks have been added, so end-users are less likely to run into issues</li> </ul>	
OPNFVDOC	Sofia Wallin			
Apex	Tim Rozet	<p>Amar: I found this in JIRA:</p> <ul style="list-style-type: none"> <li>• Pike support</li> <li>• Pure Upstream deployment option</li> </ul>		
OVNO	Stuart Mackie			
SDNVPN	Periyasamy Palanisamy	<ul style="list-style-type: none"> <li>• Testcase for ODL's ECMP (Equal-cost multi-path routing) support</li> <li>• os-odl-bgpvpn scenario with XCI</li> <li>• Extensive ODL resync testcases</li> <li>• Improved stability of Test case runs in CI setup</li> </ul>		
FDS	Frank Brockners	<ul style="list-style-type: none"> <li>• Native L3 router support, i.e., VPP instead of the Neutron/OVS grouter mechanism for scenarios which directly integrate VPP and OpenStack (using the networking-vpp ML2 driver)</li> <li>• HA for L3 router for scenarios which directly integrate VPP and OpenStack (using the networking-vpp ML2 driver)</li> <li>• Support for "Tap as a Service (TaaS)" for scenarios which directly integrate VPP and OpenStack (using the networking-vpp ML2 driver).</li> </ul>		
SampleVNF	Deepak S	<ul style="list-style-type: none"> <li>• Improved Proxmox documentation</li> <li>• Adding Security gateway testing</li> <li>• support for dpdk 17.11</li> <li>• REST API support for all the VNFs</li> <li>• Bug fixes for some of latency, pkt_size etc issues</li> <li>• Added Zero packet loss testing in prox etc</li> </ul>	<p>New testcases and features in Proxmox helps to tune &amp; benchmark the NFVi infrastructure.</p> <p>REST APIs help for easy integration of VNFs to testing projects.</p>	
Container4NFV	Xuan Jia	<ul style="list-style-type: none"> <li>• Enabled Istio,Helm in Kubernetes.</li> <li>• Support SR-IOV,Multus on ARM platform</li> <li>• Add one containerized VNF</li> </ul>	<ul style="list-style-type: none"> <li>• Support VNF in different platform</li> <li>• Using Helm to manage VNFs</li> <li>• Help user to use cloud native technology.</li> </ul>	
Calipso (formerly Vina)	Koren Lev	<ul style="list-style-type: none"> <li>• Support Contiv/VPP, Flannel in Kubernetes.</li> <li>• Enhancement to impact analysis and clique_types for topology generations</li> <li>• Add monitoring for physical and physical-virtual switch connection</li> </ul>	<ul style="list-style-type: none"> <li>• Scan and discover, monitor virtual networking in both OpenStack and K8s</li> <li>• Analyze impact and visualize dependencies</li> <li>• Modeled for Multi environments : Bare, K8s, OpenStack, VMware</li> </ul>	

OVN4NFV	<a href="#">Trinath Somanchi</a>	<ul style="list-style-type: none"> <li>Improved Scenario Documentation.</li> <li>Scenario Support with JOID, APEX and FUEL installers.</li> </ul>	Help users to implement Service Function chaining and Mixed environment support with OVN.	
NFVBench	<a href="#">Alec Hothan</a>	<ul style="list-style-type: none"> <li>support benchmarking for non-Openstack based systems</li> <li>more stable release</li> <li>better support for multi-chaining</li> <li>better support for SRIOV PVVP with vswitch between VM</li> <li>support fluentd based logging</li> <li>newer version of TRex</li> <li>newer version of testpmd DPDK</li> </ul>	<ul style="list-style-type: none"> <li>over 30 Jira tickets addressed in this release</li> <li>tested on more platforms</li> </ul>	
Stor4NFV	<a href="#">Shane Wang</a>	<ul style="list-style-type: none"> <li>Integrate K8s with Ceph and OpenSDS</li> </ul>	<ul style="list-style-type: none"> <li>Help users to use Ceph and OpenSDS with K8s</li> </ul>	
Auto	<a href="#">Tina Tsou</a>	First stage of integration of ONAP with OPNFV.	It makes more realistic how the service provider will manage VNFs. Validate ONAP in OPNFV architecture.	<a href="#">Auto Use Cases</a> <a href="#">Auto Documentation</a>
SNAPS-OO	<a href="#">Steven Pisarski</a>	<ul style="list-style-type: none"> <li>Added support for cinder block storage (Volumes, Volume Types, and QoS Specs)</li> <li>SNAPS object instantiation from existing objects in OpenStack</li> <li>Ensure an objects of the same type and name can be created within separate projects</li> <li>Ability to add a floating IP to an existing server/VM instance</li> <li>Added method to OpenStackVmInstance that can tell the client when cloud-init has completed</li> <li>Added support for nested Heat templates</li> <li>Improved remote session management</li> <li>Begun support for Magnum</li> </ul>	The SNAPS-OO library now supports more OpenStack object types and manages it's HTTP sessions with OpenStack much better by ensuring they are closed when an object is cleaned up. The library now also has the ability to instantiate SNAPS objects from ones already deployed to OpenStack and gives the user a few more methods for controlling a server/VM instance.	
Clover	<a href="#">Stephen Wong</a>	<p>Fraser is initial release for Clover, which includes:</p> <ul style="list-style-type: none"> <li>Service mesh (Istio) installation and verification (including simple weighted route rules validation tool)</li> <li>Logging (fluentd), tracing (opentracing + Jaeger), monitoring (Prometheus) installation and verification</li> <li>Sample componentized VNF that can run on top of Istio (and validated)</li> </ul>	Preliminary steps to demonstrate how to build and operate a VNF as if it is a cloud native application.	Need follow-up