Networking
Interoperability Testing
Convergence

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Linux Foundation
Agenda

› Open Source Networking and OPNFV
› What is OPNFV Plugfest?
› OCP at OPNFV Plugfests
› Future collaboration
Open Source Networking Landscape

- **Services**
  - Application Layer / App Server
  - Network Data Analytics
  - Orchestration, Management, Policy
  - Cloud & Virtual Management
  - Network Control

- **Software**
  - Operating Systems
  - IO Abstraction & Data Path
  - Disaggregated Hardware

- **Automation of Network + Infrastructure + Cloud + Apps + IOT**

The diagram illustrates the integration and test automation of various components, including:

- **Product, Services & Workloads**
  - ONAP
  - SNAS.io
  - OpenStack

- **Standards**
  - TM Forum
  - ITU
  - NIST
  - ONF
  - IETF
  - ETSI
  - IEEE 802
  - Open Networking Foundation

- **Infrastructure & Networking**
  - Linux
  - OpenDaylight
  - FRR
  - OVS
  - i2O
  - DPDK
  - OpenStack
  - OpenSwitch
  - OpenDataPlane
  - Open Compute Project
  - Telecom Infra Project

**The Linux Foundation**

**Cloud Foundry**

**Cloud Native Computing Foundation**
What is OPNFV?
OPNFV Community

Creates a reference NFV platform through system level integration, deployment and testing.

<table>
<thead>
<tr>
<th>Project launched</th>
<th>September, 2014</th>
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<tbody>
<tr>
<td>Number of releases</td>
<td>5</td>
</tr>
<tr>
<td>Planned releases in 2018</td>
<td>Two release per year: Fraser (April) + Gambia (October)</td>
</tr>
<tr>
<td>Number of Projects</td>
<td>53</td>
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Code contributing organizations in 2017
More details available at [https://opnfv.biterg.io](https://opnfv.biterg.io)
OPNFV Testing Community

http://testresults.opnfv.org/reporting/index.html
OPNFV Verified Program

- **Announced Feb 6, 2018**
- Demonstrates the readiness and availability of commercial products based on OPNFV
- Uses an open source platform as referent to measure compliance of commercial products—a new and innovative step for the industry
- Automated test suite developed by the OPNFV community
- Initial version tests infrastructure layer of the NFV stack
- Supports both self-testing and third-party lab testing
- Expands market for OPNFV-based infrastructure and applications
- More details at:
  - Overview Page: [https://www.opnfv.org/verified](https://www.opnfv.org/verified)
  - Portal: [https://verified.opnfv.org](https://verified.opnfv.org)
OPNFV Community Hardware Resources: Pharos project

› Facilitate collaborative testing
› Provide developers with substantial resources
› Ensure OPNFV applicability across architectures, environments and vendors
› Create more robust, interoperable releases
› It’d be great to welcome new Pharos labs with latest & greatest OCP servers…

https://www.opnfv.org/developers/pharos
https://wiki.opnfv.org/display/pharos/Pharos+Home
https://wiki.opnfv.org/display/INF/Lab+as+a+Service
OPNFV Community Hardware Resources: LaaS

› A new infrastructure with readily installed scenarios for testing, development, etc.
› Mix of Intel (38) and ARM (14) based servers + switches
  › Note: No OCP HW yet
› More info at https://wiki.opnfv.org/display/INF/Lab+as+a+Service

https://labs.opnfv.org/
OPNFV Plugfest

› A weeklong event where participants work on the interoperability of OPNFV platform such as deployment/test, network integration, VNF applications, etc.

› This is a public event and is free of charge
  › Participation from non-members and service providers in all our Plugfests
  › Participants are required to sign the Rules of Engagement

› Plugfest is held following each major OPNFV release
  › Brahmaputra Plugfest: Hosted by CableLabs in Louisville, CO
  › Colorado Plugfest: Hosted by University of New Hampshire-InterOperability Lab in Durham, NH
  › Danube Plugfest: Hosted by Orange in Chatillon, France
  › Euphrates Plugfest: Hosted by Intel in Hillsboro, OR
Deployment/Testing of OPNFV on different hardware/installer combinations

- SDN controller integration with different installers
- VNF applications running on OPNFV Brahmaputra

Colorado Plugfest

- Open Compute Project (OCP) based hardware
- Lenovo OP@L + Nokia Airframe
- MANO (Open-O) integration with OPNFV
- Multi-site deployment
Danube Plugfest

- Continued multi-site testing with an “Edge” server
- MANO & Full stack testing
- Stress testing with commercial load/traffic generators

Euphrates Plugfest

- Container orchestration
- VNF onboarding
- Cross Community CI (XCI)
- Installer teams’ hands-on sessions
Future Collaboration

› Fraser Plugfest: A co-located OPNFV Plugfest/ETSI PlugTest on June 4 – 8, 2018 in Sofia Antipolis, France (ETSI campus)
  › Event info:
    › Event wiki page: [https://wiki.opnfv.org/display/EVNT/Plugfest+-+Fraser+Release](https://wiki.opnfv.org/display/EVNT/Plugfest+-+Fraser+Release)
      › Will include details on bi-weekly planning calls, registration info, etc.
    › Testing the latest OPNFV Fraser release
    › Contributing new test cases for ETSI
    › Evolution of XCI, testing projects, etc.
  › We’d like to work with more OCP community members and OCP networking products at future Plugfests
    › OCP products in past events were limited to servers
    › Equipment can either be on-site or remote
Another Collaboration Opportunity

› Virtual Central Office (VCO) demo

› OPNFV brought Network Functions Virtualization (NFV) and software defined networking (SDN) technologies to the Central Office (CO) with OpenDaylight for residential and enterprise services

› Whitepaper, brief, videos from the first demo available here: https://www.opnfv.org/resources/virtual-central-office

› VCO demo 2.0 w/ mobile in progress: https://wiki.opnfv.org/display/OSDD/VCO+Demo+2.0+Home

› Exploring options for connecting with and/or replicating on all-OCP lab
Resources

› Plugfest wiki page: https://wiki.opnfv.org/display/EVNT/Plugfest

› Plugfest reports:

› Plugfest Rules of Engagement: