Introduction to the 'Pharos' project

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Topics

- Pharos Project overview
- Pharos Goals and Project/Community needs
- Current Pharos Labs
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- How to contribute ...
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Pharos Project overview
OPNFV – The Project and its goals

• Integration and Testing is an integral part of OPNFV
The Pharos Project

- The OPNFV test bed project "Pharos" is a federated NFV testing infrastructure of community labs around the world designed for hosting continuous integration, deployment, and testing of the OPNFV platform.

- The diversity of perspectives across developers, users and vendors participating in these labs make the project critical to the success of the OPNFV platform.
The Pharos Project:

- is developing the OPNFV lab infrastructure
- is geographically and technically diverse
- assists in developing a robust and stable OPNFV platform
- combines community labs (hosted by member organizations) and an OPNFV lab hosted by the Linux Foundation
- provides development/testing resources to developers
Pharos Project Goals

• Facilitate collaborative testing across scenarios that conform to a baseline OPNFV specification (compute, network and storage)

• Provide developers with substantial resources for early testing within realistic NFV environments via an open, consistent, repeatable test domain

• Help ensure OPNFV applicability across architectures, environments and vendors through a collection of diverse labs and a broad range of hardware

• Help create more robust, interoperable releases
Current Pharos Labs
Current Pharos Labs

- The Pharos Project includes a large number of member company labs spanning North America, Europe and Asia.
- The Linux Foundation hosts an OPNFV infrastructure lab used primarily for continuous integration (CI), build and release deployment/testing.
- [https://wiki.opnfv.org/display/INF/Hardware+Infrastructure](https://wiki.opnfv.org/display/INF/Hardware+Infrastructure)
Current Pharos Labs cont.

• The current infrastructure is already heavily used for development, CI and release purposes.

• The labs provide a wide range of scenarios ranging from the installer (TripleO, Fuel, Juju, Compass) over the SDN controller (ODL, ONOS, OpenContrail) to network protocols (nofeature, bgpvpn, sfc)

• A comprehensive WIP list is here: https://wiki.opnfv.org/display/INF/Scenario+Infrastructure
Pharos LAB specification
Pharos LAB specification

- The Pharos specification defines the OPNFV hardware environment
- A secure, scalable, standard and HA environment
- Supports the full OPNFV deployment lifecycle (this requires a bare metal environment)
- Supports functional and performance testing of the OPNFV releases
- Provides mechanisms and procedures for secure remote access to the test environment
How to contribute ...
A Pharos compliant lab

- One jump server on which the virtualized Openstack/OPNFV installer runs
- 5 compute / controller nodes
- A configured network topology allowing for LOM, Admin, Public, Private, and Storage Networks
- Remote access as defined by the slave configuration guide
Pharos Lab Hardware Requirements

- **CPU:**
  - Intel Xeon E5-2600v2 Series or newer (BIOS/EFI)
  - AArch64 (64bit ARM architecture) compatible (ARMv8 or newer, EFI compatible)
- **Local Storage Configuration (minimum, faster disk nice and may produce better results):**
  - Disks: 2 x 1TB + 1 x 100GB SSD
    - The first 1TB HDD should be used for OS & additional software/tool installation
    - The second 1TB HDD configured for CEPH object storage
    - Finally, the 100GB SSD should be used as the CEPH journal
- **Boot:** Virtual ISO boot capabilities or a separate PXE boot server (DHCP/tftp or Cobbler)
- **Memory:** 32G RAM Minimum
- **Power Supply**
  - Single power supply acceptable (redundant power not required/nice to have)
Pharos Specification and Documentation

- https://wiki.opnfv.org/display/pharos/Pharos+Specification

- http://artifacts.opnfv.org/pharos/docs/index.html