Challenges in OPNFV

❖ It is not straightforward to bring entire stack up
  ➢ Especially with the number of combinations we have
  ➢ Resource intensive - cannot be done on a developer’s laptop

❖ Allocating resources statically - Pharos Community Labs
  ➢ Not scalable
  ➢ Inefficient and under utilization
  ➢ Bottleneck for development and releases
Lab as a Service (LaaS)

- Automated provisioning, deployment, and verification
  - Configurable to fit user’s needs
  - Runs on baremetal servers

- Allocating resources dynamically
  - Use resources as they are needed
  - Scalable for development and releases
History

- MVP - Launched February 2018
  - Sub-project of Pharos
  - Incubating for almost 1.5 years

- Opened to LFN - September 2019
  - TSC vote approved the LaaS 2.0 release
Architecture of LaaS

1) Issue request
2) Trigger deployment
3) Deploy OPNFV
4) Update status
5) Mail access details
6) Connect to OpenVPN server, SSH to jump host, access VIM UI, etc.
Scope

❖ Develop, run, maintain, and administer the LaaS dashboard

❖ Document and provide an API from that dashboard

❖ Develop and maintain a reference backend implementation
  ➢ LaaS as an OPNFV project is not responsible for the participating labs running the backend or their hardware
Goals and Deliverables

❖ Provide on demand access to a configurable hardware environment (lab) through a web dashboard

❖ Automatically deploy OPNFV within a user’s lab

❖ Integrate with other LFN projects (e.g. ONAP) and provide them within a user’s lab
Testability

❖ Dashboard
➢ Unit tests
➢ Integration tests
➢ Compatible with OPNFV CI/CD toolchain

❖ Reference Backend
➢ Unit tests
➢ Not Compatible with the OPNFV CI/CD toolchain
Release Schedule

❖ True CI/CD
  ➢ Continuously Deployed
    ■ No tagged / stable releases
    ■ Deliver bug fixes and new features ASAP
    ■ Continuously documented
  ➢ Continuously Integrated
    ■ Consumes OPNFV / ONAP artifacts for deployment
Lab as a Service (LaaS) Project Proposal

- Questions and feedback encouraged
- Contributors and committers welcome!
- Official proposal page
  - https://wiki.opnfv.org/display/PROJ/Lab+as+a+Service