



OPNFV

□ **LINUX FOUNDATION**
COLLABORATIVE PROJECTS

Lab as a Service

Project Proposal

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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

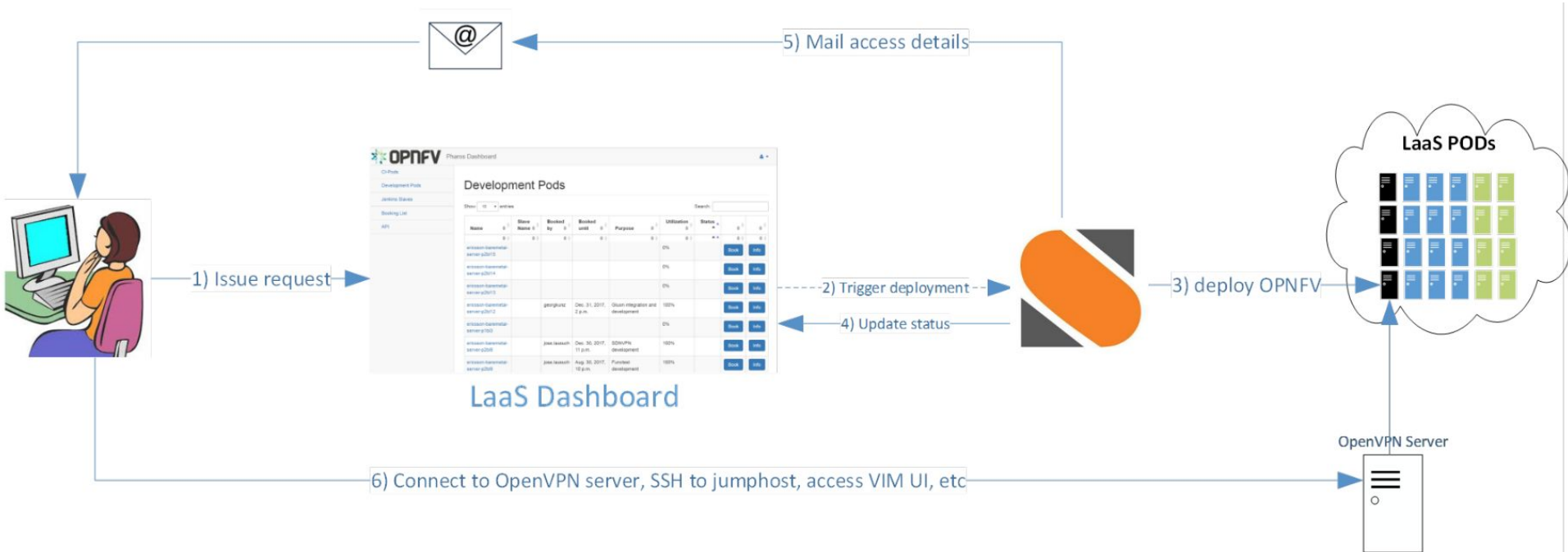
- ❖ Allocating resources dynamically
 - Use resources as they are needed
 - Scalable for development and releases



- ❖ 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





- ❖ **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



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

- ❖ Reference Backend
 - Unit tests
 - Not Compatible with the OPNFV CI/CD toolchain



- ❖ 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>