

# PROJECT HOSTING 3.0

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# SESSION SUMMARY

- Brief history of FOSS hosting
- Advances made
- OSL Vision 2.0
- Discuss future of FOSS hosting

# TYPES OF FOSS HOSTING

File Hosting

Hosted Platform Hosting

Co-Location Hosting

Continuous Integration Hosting

# EVOLUTION OF FOSS HOSTING

## FILE HOSTING

Typically FTP and/or HTTP web servers hosted by:

- Universities (IU, MIT, OSU)
- ISP's
- Other orgs (Kernel.org, ISC)

# HOSTED PLATFORM HOSTING

- SourceForge (1999)
- GNU Savannah (2001)
- LaunchPad (2004)
- Google Code (2006)
- Github (2008)
- GitLab (2011)

# CO-LOCATION HOSTING

- ISC (1994)
- OSU Open Source Lab (2003)
- Other various universities (IU, etc)

# CONTINUOUS INTEGRATION HOSTING

- CircleCI (2011)
- Travis CI (2012)
- Drone.io (2014)

# MAJOR ADVANCES

Github

Public cloud computing

More CDN choices (some offer free services to FOSS)

CI testing platforms



# CO-LOCATION VS. PUBLIC CLOUD

Co-Location	Public Cloud
More expensive	Cheaper initial costs
Less flexible	More flexible
Better Performance	Performance varies
More control	Less control
Hardware ownership	Pay for the service

# OSL ADVANCES

## NEW TOOLS AND TECHNOLOGIES

Virtual computing / Private Cloud

- OpenStack
- Ganeti
- Containers\*

Storage Technologies

- Network attached storage (GlusterFS)
- Block storage (Ceph\*)
- Object storage (Openstack Swift\*)

# CONFIGURATION MANAGEMENT

Chef

Integration testing on infrastructure

Scale up infrastructure easier

Standardize deployments of services

Delegate infrastructure code with projects

# WHAT DO FOSS PROJECTS NEED?

## TESTING RESOURCES

Flexible testing compute resources

Customizable test integration tools

Unique testing challenges

# MANAGED SERVICE HOSTING

Hosting complex platforms:

Gerrit, Gitlab, Jenkins, etc

Mailman, Jira, etc

They need the service, but don't want to manage it

# NEUTRAL CDN MIRRORING

Projects get popular and need to scale fast

Current FTP mirroring infrastructure not flexible enough

API-driven, geographically diverse

Hosted by a trusted entity

# ACCESS TO SPECIALIZED HARDWARE

New and upcoming hardware (ARM64, POWER8, Open Compute, etc)

Porting and fixing bugs

IoT

**HOW DO WE GET THERE?**



# OSL VISION 2.0

## TECHNICAL UPGRADE

Build and expand Cloud infrastructure (Ganeti & OpenStack)

Automated Build Services

Test Services and Support

Project Dashboards (Data metrics)

OSL CDN (ftp mirroring 2.0)

Improved Infrastructure Security

# OSL UNIVERSITY NETWORK

Collaborate with global universities

Host half rack of gear

Cloud services (compute, storage, etc)

Mentor students at those universities

Kickstart the OSL concept to other universities

# RE-ENGINEER BACKEND SERVICES

Standardize Server Management (Chef+CentOS)

Catch up with technology trends

Fully testable infrastructure

Make it more robust to failure

Easier to deploy new services for projects

# OSL PAAS

Majority of our hosting is simple web applications

Scalable, secure and flexible for projects needs

API-Driven platform for projects

Speed up and expand our capability

# OSL - SUPERCCELL

## CURRENTLY

Created in 2010 in conjunction with Facebook

Utilized Ganeti to offer VM compute resources to projects

Dozen or so projects are currently using it

# PLANS

Rebuild with OpenStack and expand resources

Ease on-boarding for projects

Offer pre-built managed CI solutions

Access to upcoming testing suites from Academia

# EDUCATION AND DIVERSITY

Open Source track in EECS at OSU

Online classes targeted at DevOps topics

Diversify the OSL workforce

# SUMMARY

Testing resources are important to projects

Need a place to host unique hardware

Managed service hosting

API-Driven Platforms for common tools

Increase our academic mission around DevOps and FOSS

We need your help!



# DISCUSSION FUTURE OF FOSS HOSTING

What do YOU need?

What is missing?

What's important to you?

What should the OSL be doing?

# QUESTIONS?

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We're hiring! <http://osl.io/sysadmin2016>

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