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

- GlusterFS
- Ceph*
- Swift (S3)*

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 - SUPERCELL

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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