DEVOPS and SLAC

"what's old is new again"

What is DEVOPS?

- An attempt to bridge the separation of Operations and Development by both using development paradigms to manage operational machines and services; and having Operations manage the development environment.

- (i.e. like the bad old days when the guy that wrote the server ran the service, and just installed new versions as the bugs were fixed)

Key principals of DEVOPS

- Infrastructure as Code

- Automated testing

- Rapid Deployment (i.e. Continuous Deployment)

Infrastructure as Code

- Use a configuration management system such as Puppet or Chef

- Use the development concepts of develop, test, production and a modern revision control system to be able to recreate the entire environment from the code archive

- Changes are installed by committing to the source repository

Automated Testing

- Create a comprehensive automated test suite

- All changes must pass test suite before being accepted, integrated into revision control system

- Jenkins - Automated build/test platform

Rapid/Continuous Deployment

- If it passes the tests, deploy the software

- Generally this involves moving code from test to production areas of repository

- Any commit to production branch triggers deployment

- Rapid response to errors and easy roll-back required

Is Taylor DEVOPS?

- Infrastructure as code - Yes

- Automated Testing - No

- Continuous Deployment - Yes

Replacing Taylor

- Moving away from AFS requirement for centrally managed machines

- Some of what taylor does will be replaced with Chef

- Some of what taylor does will be replaced with LDAP based authorization

- Some of what taylor does will not be replaced

Transition Process in Stages

- Stage 1 – Central Infrastructure Servers

- Stage 2 – Batch

- Stage 3 – Specialized Clusters

- Stage 4 – Workstations

External Resources

- Chef

  - http://www.opscode.com/

- Jenkins

  - http://jenkins-ci.org/

- Lot's of good talks

  - http://chefconf.opscode.com/