IMPACT OF THE TECHNOLOGY FEE

We have had over $170,000 of funding from the student technology in the last two years:

- ► $34,000 for a new network file system
- ► $57,000 for a replacement core router and firewall
- ► $20,000 for wireless upgrades
- ► $23,000 for projector replacement
- ► $31,000 for new desktops in the Computer Science Lab in 202MCH
- ► $7,000 for new Teaching Assistant machines in MCH 114

THE SYSTEM GROUP

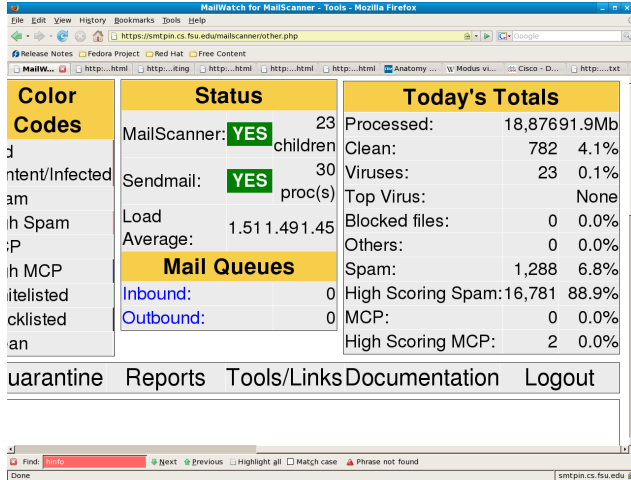The system group has consisted of around 15 people, although it has been over 20 at times.

- ▶ 1 Permanent A&P, Yu Wang (until October 1st) and now Bret Whissel (April 8th)
- ▶ 3-9 OPS students acting as system administrators, including support that we do for the College of Arts and Sciences. We also help other departments, having helped both Psychology and History find admins from our student population
- ▶ 5-15 OPS students acting as lab monitors in the Majors Lab.
- ▶ 1-2 OPS webmasters.

WHAT USER SERVICES DO WE PROVIDE?

- ▶ Email Services
- ▶ Web Services
- ▶ File Services
- ▶ Programming Environments (Linux and Solaris)
- ▶ General Shell Access
- ▶ Database Services
- ▶ Git, Subversion, and CVS Services
- ▶ Printing Services
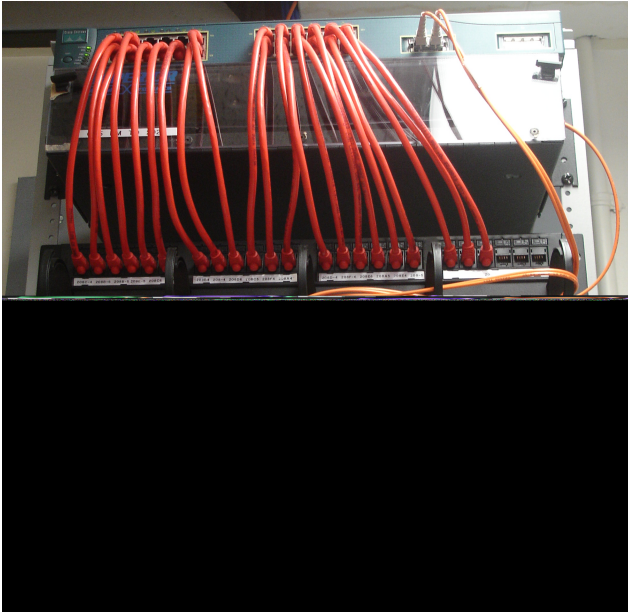- ▶ Windows Terminal Services
- ▶ Desktop Support
- ▶ Helpdesk

WHAT INFRASTRUCTURE SERVICES DO WE PROVIDE?

- ▶ Filesystems
- ▶ DHCP
- ▶ Backup
- ▶ Security Cameras
- ▶ Domain Controllers
- ▶ Spam Filtering
- ▶ Wireless
- ▶ Log server

- ▶ 40+ servers

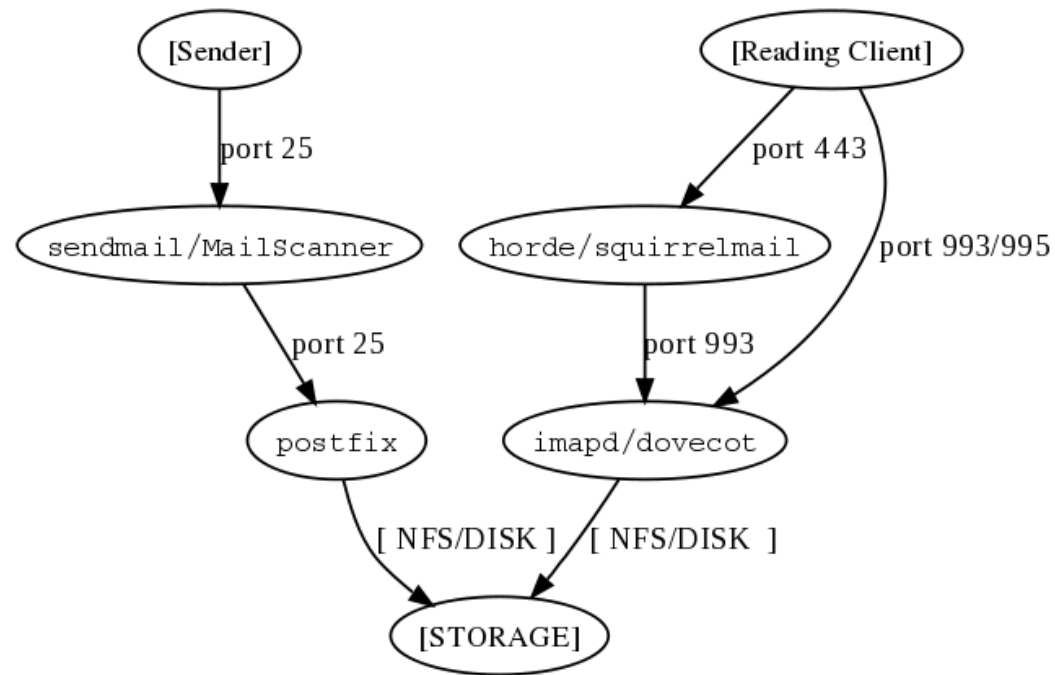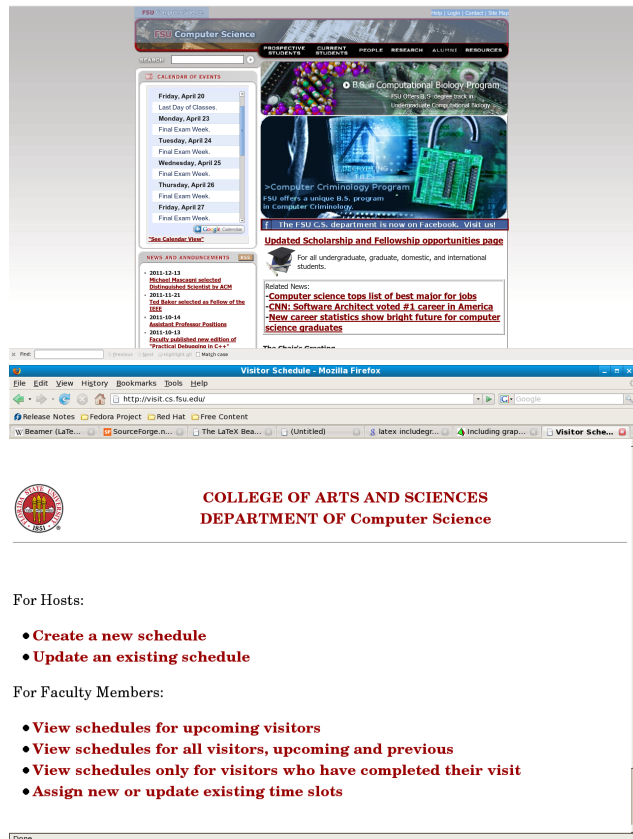- ▶ Many routers and switches

- ▶ Lots of desktops

- ▶ Technology-enabled classrooms (all of them currently have machines 5 years or less old, and our 5 year old machines just received funding to be renewed)

OVERALL STRUCTURE OF EMAIL SERVICES

▶ **websrv.cs.fsu.edu, supporting many, many virtual hosts:**

acm.cs.fsu.edu, msdnaa.cs.fsu.edu,

www.cavis.fsu.edu, cybersec.cs.fsu.edu,

saittest.cs.fsu.edu, fci.cs.fsu.edu, service.cs.fsu.edu,

www.lens.cs.fsu.edu, fsvision.fsu.edu,

system.cs.fsu.edu, www.sait.fsu.edu, lit.cs.fsu.edu,

webmail.cs.fsu.edu, www.aces.cs.fsu.edu

▶ **websrv2.cs.fsu.edu, student pages**

▶ **visitwww.cs.fsu.edu**

OUR FILESERVICES

- ▶ NFS is still widely used throughout the department
- ▶ We also encourage user-directed FUSE mounting giving the users greater flexibility in mounting convenient directories

OUR DATABASE SERVICES

- ▶ We offer MySQL on dbserv.cs.fsu.edu
- ▶ For webservices, we strongly encourage use of lightweight databases such as SQLite which are arguably more secure – there are no separate credentials to worry about when accessing SQLite. Also, we recommend "varnish"-like solutions.

GIT, SUBVERSION, AND CVS SERVICES

▶ We have dedicated Git, Subversion, and CVS servers.

▶ We are using these as code repositories, although there other possibilities such as keeping up our webserver pages (indeed, years ago, we did use local CVS to keep up many of our flat HTML pages although that has lapsed.)

WINDOWS TERMINAL SERVICES

- ► csterm1 for Windows Terminal Services
- ► Usable from both Linux and Windows

Bits and pieces in the background

▶ Perhaps the surprising thing about "infrastructure" is that we do provide some security cameras, mainly for server rooms and labs

▶ The systems group also has a camera in 208 MCH since we are also in and out a good bit.

OUR UPCOMING CHALLENGES:

- ▶ It's time to refresh MCH 202 Lab's computers, most of which are now at the five year mark, and for which we just received the funding to do so.

- ▶ Improve our UPS. It's adequate for short outages, but we need more capacity; also some of our units are getting quite old.

- ▶ The university-wide rollout of new VOIP.

OUR UPCOMING CHALLENGES:

▶ Other server upgrades: Several of our servers are still running Scientific Linux 4, and CentOS 4 and 5; CentOS 6 has been out for two years and we need to upgrade most of our servers. We also need to rationalize how we do virtualization, and in particular, Our backups and failover capacity for our virtualized servers are inadequate.

▶ We still have networking improvements yet: we want to a have 100% gigabit network from desktop to our demarc. That's going to be quite a challenge given the state of the Love Building. The interfloor connections are probably the biggest challenge. The machine room needs to be redone, with a lot of underfloor wiring that should be improved, and we are looking at using overhead tracking.

Summary

► The systems group is in 208 MCH, across the parking lot from the Love Building