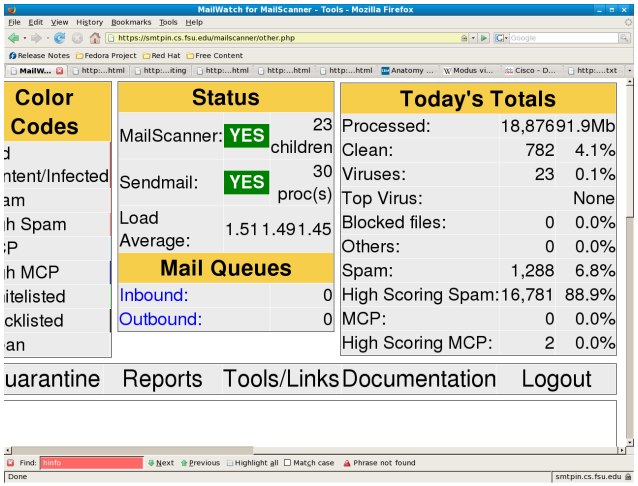
HIGHLIGHTS FOR 2011-2012

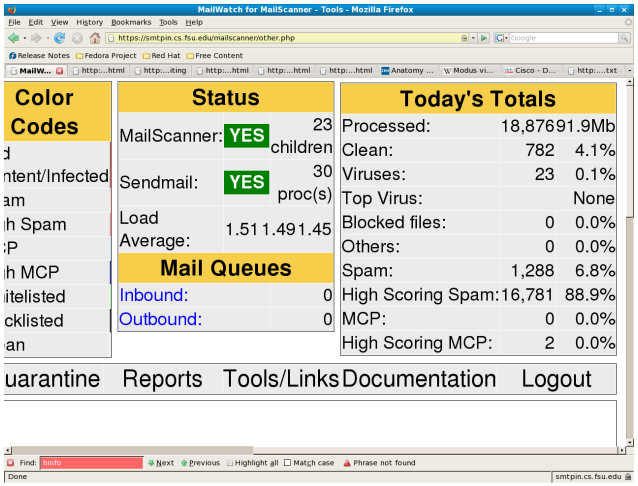
FUNDING SUCCESSES



- Student Tech Fee ($113,000)
- Arts & Sciences ($28,000)

HIGHLIGHTS FOR 2011-2012

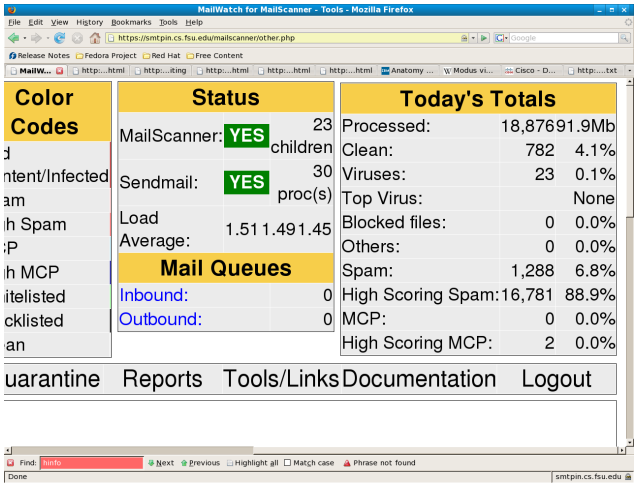
EQUIPMENT



- Upgraded our wireless system ($21,000)
- Replaced all of the networking lab monitors ($9,000)
- Replaced staff desktops ($9,600)

HIGHLIGHTS FOR 2011-2012

EQUIPMENT



- Began extensive upgrade of our network infrastructure ($57,000)
- Began complete replacement of student network file system and backups ($34,000)

THE SYSTEM GROUP

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

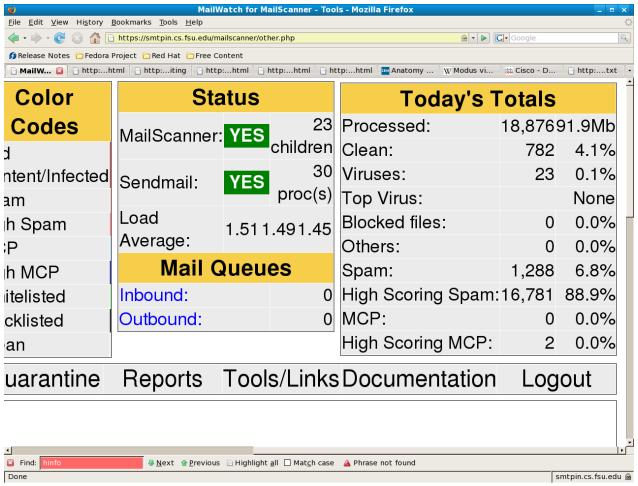
- 1 Permanent A&P
- 3-9 OPS students acting as system administrators, including support that we do for the College of Arts and Sciences. We also help other departments, having helped both Psychology and History find admins from our student population, and recently helped Statistics with some planning on their Moodle services.

THE SYSTEM GROUP

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

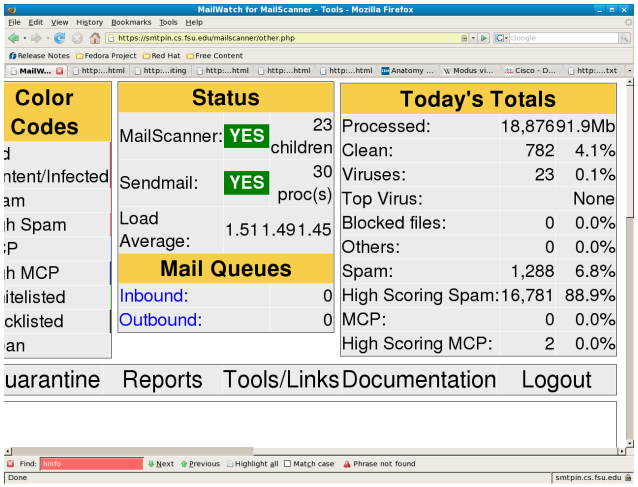
- 5-15 OPS students acting as lab monitors in the Majors Lab.
- 1-2 OPS webmasters.
- Occasionally, an independent inventory checker position.

WHAT USER SERVICES DO WE PROVIDE?



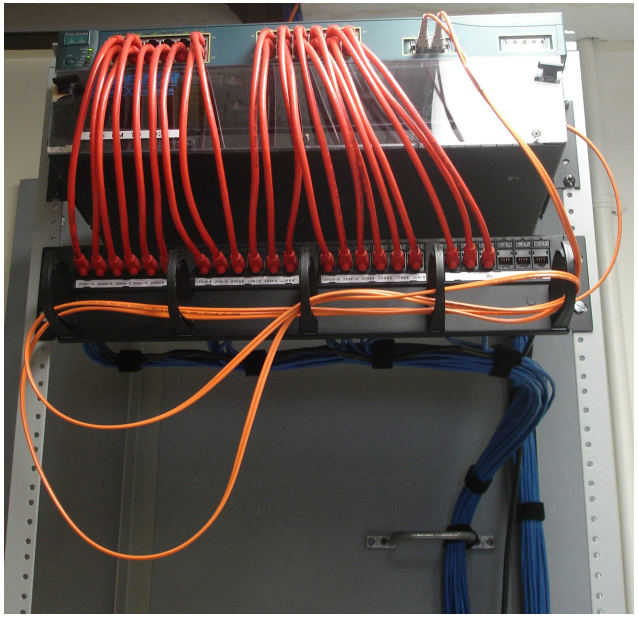
- Email Services
- Web Services
- File Services
- Programming Environments (Linux and Solaris)
- General Shell Access
- Database Services

WHAT USER SERVICES DO WE PROVIDE?



- Database Services
- Subversion and CVS Services
- Printing Services
- Windows Terminal Services
- Desktop Support
- Helpdesk

What infrastructure services do we provide?

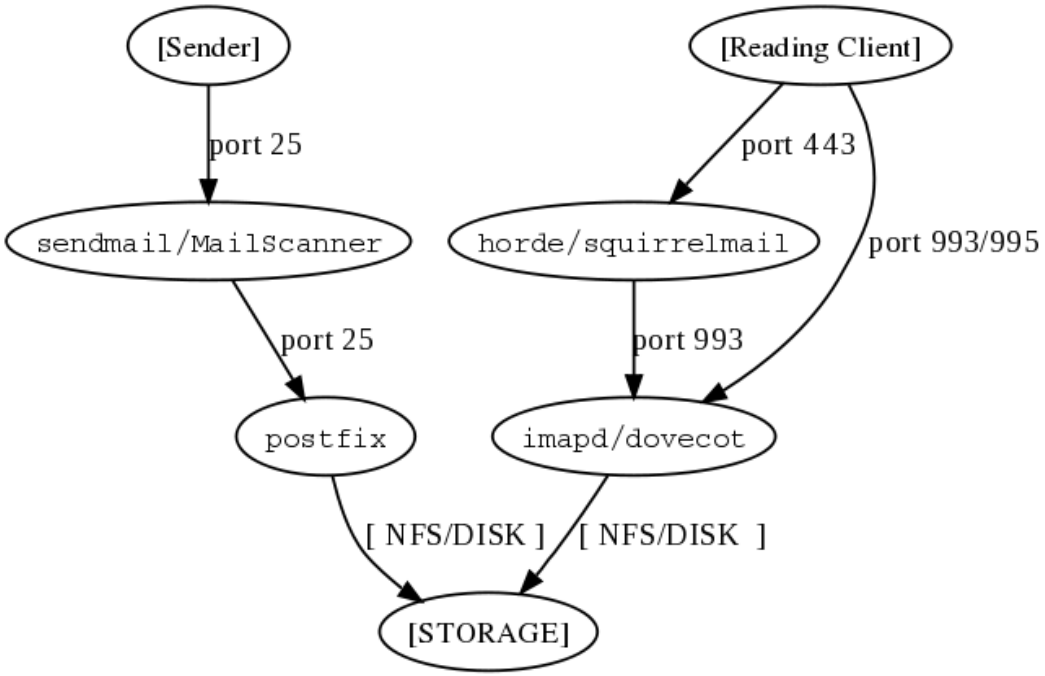


- DHCP
- Backup
- Security Cameras
- Domain Controllers
- Spam Filtering
- Wireless
- Log server

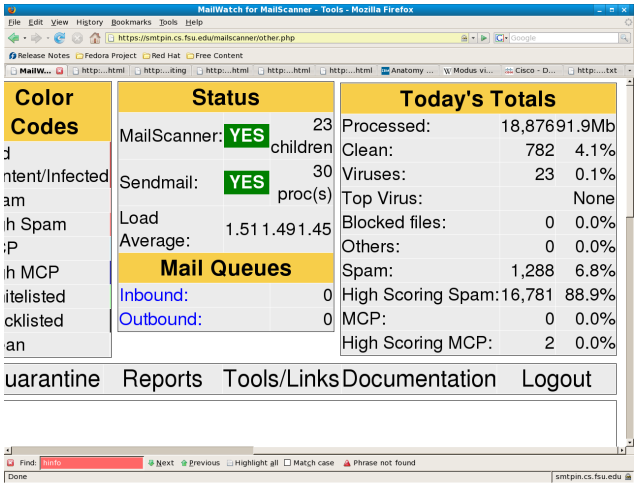
MANY BOXES, DIFFERENT ENVIRONMENTS

- 40+ servers
- Many routers and switches
- Lots of desktops
- Technology-enabled lab and classroom (all machines are now 4 years or less)

Overall Structure of Email Services

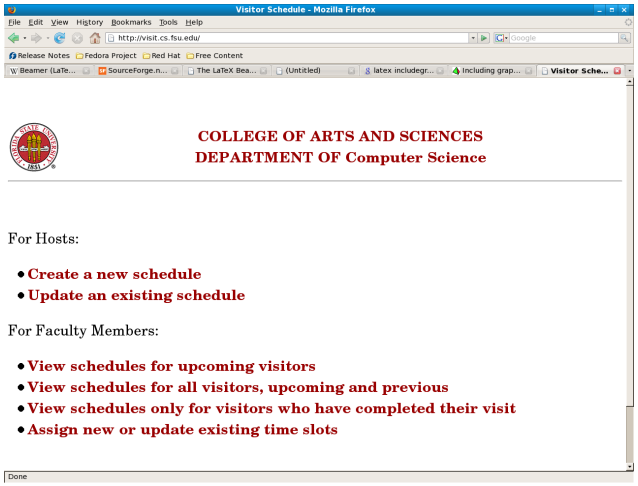


How Email Works



- sendmail/MailScanner
- sendmail uses RBLs, GreetPause, and denies hosts that have no reverse-lookup record
- we don't (yet) require SPF, but the trend is very clearly that way (now over 50% of sites provide SPF records)
- MailScanner calls SpamAssassin which assigns a "spam score" to each email
- SpamAssassin uses DCC, Razor, and (like sendmail) also RBLs

Our webservers



- 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, 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 widely used throughout the department
- I would like to see us move toward user-directed FUSE mounting using sshfs rather than system administrators configuring NFS on an *ad hoc* basis.
- Not only is the maintenance much simpler for everyone, it also offers users far more flexibility in what filesystems they can have mounted

Our fileservices

- sshfs syntax is very simple:

```
sshfs
langley@diablo:/home/faculty/langley
mounts/diablo
```

- “gotchas”: you likely want to set up a ssh heartbeat as a keep alive

Our database services

- We offer MySQL on dbserv.cs.fsu.edu
- We overuse MySQL when such lightweight databases such as SQLite would probably be more than sufficient, and arguably more secure – there are no separate credentials to worry about when accessing SQLite.

Subversion and CVS services

- We have a dedicated Git, Subversion, and CVS server.
- 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
- You can use this from Linux with `rdesktop`
- This can save you from dual-booting or having two desktops.
- Of course, you can also use virtualization to also save on desktop space; for Linux and Windows, it's hard to beat VirtualBox (available for free at www.virtualbox.org)

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
- We also have a camera in 208 MCH since we are also in and out a good bit.
- We use Zoneminder to monitor the IP cameras, and the closed circuit camera output goes to a dedicated server
- We use Cacti for performance monitoring