Computer Systems Lab

David Parter
Director of Academic Computing Facilities
Computer Sciences Department

New Grad Student Orientation
August 27 2012
Welcome!

There is too much to tell you today, but I'll try and cover enough to get you started.
The Computer Systems Lab

Our Mission:

*Support the effective, efficient and secure use of Information Technology by Students, Faculty and Staff in Teaching, Learning, Research and Public Service*
Who We Are

• 6 full-time staff
  David Parter, Director
  Jacob Ela
  James Babb
  Jerel Mackey
  Tim Czerwonka
  John Perksin

• 10-12 undergraduate students
  • Currently 9 students, including 2 starting next week
  • 10-30 hours/week
  • School work comes first – especially at exam time
What We Do

- Develop and Support computing facilities for the Computer Sciences Department
  - Research, Instruction and Administration
- Desktop workstations, Instructional Labs, Servers, Infrastructure, special projects & facilities
Contacts & Information

- Email: lab@cs.wisc.edu
  - Ticket system
- Service Desk: room 2350 CS
- Phone: 262-2389
- Office Hours:
  - 8-12, 1-5 M-F
- http://cs.wisc.edu/csl
CSL Computing Environment
CSL Computing Environment

- Operating Systems
- File Systems and Storage
- Application Software
- Desktops, Servers, VMware virtual servers
- Network services: Mail, Web, Printing, etc
- Networks
Your CS Account

- Unified account for most CSL services: Linux, Windows, Mail, etc
  - Single username & password
  - NOT the same as your campus NETID
- **username@cs.wisc.edu** email address
Security Issues

- The CSL takes security very seriously
  - Devote a significant effort to security issues
  - Monitor security mailing lists
  - Up-to-date patches
  - Secure configurations
  - Goal: Protect our users' privacy, file integrity, resources
  - Allow flexibility appropriate for a research university
    Computer Sciences department
Keeping Your Account Secure

• Do NOT share your password with anyone

• Do NOT tell the lab your password
  • We will NEVER ask for your password
  • Beware of “phishing” email or web sites that ask for your username and password

• Do NOT use the same password for web sites and other accounts
Keeping Your Account Secure

- Log out when not using your workstation & when you leave
- Check ACLs to assure correct access
- Report anything suspicious to lab@cs.wisc.edu
Keeping Your Laptop Secure

- Free anti-virus software from DoIT
- Apply software and operating system patches and upgrades
- Use a good password on your laptop
  - Not the same password
- Use a VPN or SSH tunnel for remote access
  - Don't trust wireless networks
Activating your CS account

- Bring your WisCard to the CSL
  - Room 2350 CS
- Username: up to 8 characters
  - Pick you username well
  - Have a second choice ready
  - Also your email address
    - Used by fellow students, faculty, prospective employers, ...
- Can't be changed once set
Supported Operating Systems:
Linux

- Redhat Enterprise Linux 6
  - 64-bit only
- Redhat Enterprise Linux 5
  - 32-bit & 64-bit
  - Phase-out will be complete this fall
Supported Operating Systems: Windows Desktops

- Windows 7
  - 64-bit only
  - Windows File Server
  - Also AFS file system

- Remote Access
  - Remote Desktop Server (soon)
Supported Operating Systems: Windows Servers

- Windows Server 2008
  - 64-bit only
  - Windows infrastructure
  - Research servers if needed
Supported Operating Systems: Apple OSX

- OSX 10.7 (Lion)
- Macintosh instructional lab (room 1370)
- Future desktop support possible
Filesystems

- AFS
  - Linux home directories, project space, software
  - Available on Windows 7
  - AFS Access Control Lists/Permissions NOT the same as Unix permissions
- Windows NTFS file server
  - Windows 7 roaming profiles & default file locations
Backups

• Backups != Archives
  • Backups are for recovery from catastrophic failure

• AFS
  • Home directories & project space
  • NOT including /common/tmp

• Windows file server
  • User profiles & file space, project space

• IMAP mail server
  • All mail folders
Backups

- Linux Desktop Workstations
  - Mail queue, special file systems on request
  - DOES NOT INCLUDE /scratch or /tmp

- Windows Desktop Workstations
  - Local disk for catastrophic failure recovery

- Instructional Workstations:
  - No local file backups
Networks

- Ethernet to all desktops
- 802.11a/g/n WIFI
- Border and Internal Firewalls
- Specialized networks for research projects
- All networks are actively managed
  - Can't connect a computer to the network on your own
CSL Wireless Networks

• Covers all CS areas of CS building
  • All of Unit III (tower)
  • 1st floor classrooms & labs
  • Condor area Unit II

• Firewall restricts inbound traffic

• Printing to CS Printers
  • See CSL web pages for more details
COMPSCI Wireless Network

- 802.1x (supported by most WIFI devices)
- SSID: COMPSCI
- Security: WPA2-Enterprise (WPA2 with 802.1x authentication)
- Authentication: CS Username and Password
- See CSL web site for details
COMPSCI-OPEN Wireless Network

- For devices that can not use 802.1X
- SSID: COMPSCI-OPEN
- No Network Encryption
  - Strongly encouraged to use a VPN: WiscVPN available from DoIT
- Authentication: CS Username and Password via web browser
CS Email

- Use web form to manage email delivery, forwarding, spam filtering
- username@cs.wisc.edu
- IMAP server: imap.cs.wisc.edu
- Web mail: webmail.cs.wisc.edu
  - Not recommended for regular use, good when traveling, away from laptop/desktop, etc
- Mailing lists via Mailman
Instructional Labs

- Linux, Windows and Mac labs
- 1st Floor CS Building
- 7AM – 1AM every day when CS building open
- Priority for instructional work – Not for research projects
- Be considerate of your fellow students
Instructional Labs: Linux

- “mumble” lab room 1350
  - 40 workstations
  - Redhat Enterprise 6
  - mumble-01.cs.wisc.edu – mumble-40.cs.wisc.edu
- Remote access via SSH
- Remote desktop via VNC soon
Instructional Labs: Windows

- Windows 7
- “cyclops” lab room 1358
  - 8 workstations: dual 24” monitors
  - 4 workstations: single 24” monitor
- “poseidon” lab room 1366
  - 20 workstations: dual 24” monitors
- “odysseys” lab room 1368
  - 15 workstations: single 24” monitor
Instructional Labs: Apple

- Room 1370
- 19 mac minis
  - Dual monitor
- 11 27” imacs
Printing and Printers

• 1st floor:
  • Black & White laser printers

• 3-7th floors:
  • Color laser printer/copiers
  • PLEASE print to B&W print queue unless you NEED color printing

• Unlimited print quota
  • Please don't abuse it
Office Workstations

• Teaching Assistants & Fellowship students
  • PC & monitor provided by CS Department
  • Redhat Enterprise Linux
    - Redhat Enterprise 6 if capable
    - Redhat Enterprise 5 if not
  • Managed by CSL
  • Fixed configuration, can't add users or change hardware
Office Workstations

- **Research Assistants**
  - PC & monitor provided by your advisor
  - Linux
    - Redhat Enterprise 6 for all new computers
    - Redhat Enterprise 5 for some computers, finish upgrades this fall
  - Windows
    - Windows 7
- Managed by CSL
Office Workstation Accounts

• Offices assigned by Perry
• TA desks/workstations
  • Desks/Workstations typically not assigned: work it out with your office mates
  • Email lab@cs.wisc.edu when you claim a workstation
    – Office number, workstation name
• RA workstations provided/assigned by advisor
• Cascade effect of office moves
Workstation Care

- Please don't turn off or reboot CSL workstations
- Please don't move the workstation
  - Send email to lab@cs.wisc.edu to request workstation move
- Clean LCD monitors with screen cleaner
  - Do NOT use window cleaner
Workstation Care

- Wipe the keyboard with a damp cloth
- Ask for replacement keyboards/mice if needed
- Report problems to lab@cs.wisc.edu
Software Support, Installation and Upgrades

• Critical Instructional software doesn't change during the semester except in emergencies

• Linux:
  • Multiple versions of software packages often available in /s/package-version/bin
  • Anything else: ask, we'll try

• Windows software: ask, we'll try

• Suggestions welcome
CS Web Servers

• www.cs.wisc.edu
  • CS Department home page
  • Project web sites

• pages.cs.wisc.edu
  • Personal web pages
  • Files in ~/public/html
CS Web Servers

- www-auth.cs.wisc.edu
  - SSL only
  - Authenticate with your CS username and password
  - Authenticated services
    - Web forms for routine requests
    - Room reservations
    - Mail list archives

- Project web/application servers as needed

- Per-user application servers if needed
Contacting the Systems Lab

• Use email if possible
  • lab@cs.wisc.edu
  • Automatically entered in request tracking system
    – Include lab@cs.wisc.edu in any follow-up mail
    – Include [CSL #NNNNNN] in Subject: line
• Provide as much information as possible
  – Don't assume we know the context
• Appropriate follow-ups to the same CSL #
• New topics: new mail to lab@cs.wisc.edu
  – New request assigned to the appropriate staff
Contacting the Systems Lab

• Use a web form if there is one
  • https://www-auth.cs.wisc.edu
  • Best way to assure fast, correct service

• Walk-in service desk, room 2350
  • 8-12, 1-5 M-F
Contacting the Systems Lab

- Plan ahead
- Read the polices and web pages
- Open to suggestions
  - lab@cs.wisc.edu
- Please understand, special cases are hard
- Busy times: start and end of each semester
Welcome, and Good Luck!