CSCF Services

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Slides available on:
https://cs.uwaterloo.ca/cscf/information-graduate-students
CSCF Structure

• 3 groups
  • Infrastructure – provides servers, network infrastructure, Active Directory, purchases all computing equipment for the School
    • Manager: Dave Gawley, plus 4 staff
  • Teaching and Administration: supports all undergraduate teaching labs, plus administrative staff, the Instructional Support Group and School meeting rooms and audiovisual services
    • Manager: Omar Nafees, plus 6 staff
  • Research Support: provides computing support for Faculty, Grads, PostDocs and Research Visitors
    • Manager: Lawrence Folland (me), Mike Gore, Gordon Boerke, Lori Paniak, Nathan Fish, Harsh Roghelia
Workstations when you arrive

• Research grads
  • Supervisor has choice of:
    • Lenovo Laptop – Windows or Ubuntu
      • Includes a built-in GPU
    • MacBook (limited quantities)
      • No GPU
    • Provide equipment themselves

• Course Masters
  • Shared rooms (DC 3335 and DC 2583A) – iMacs / PCs

• [https://cs.uwaterloo.ca/cscf/about/policies/graduate-student-workstation-options](https://cs.uwaterloo.ca/cscf/about/policies/graduate-student-workstation-options)
Research Support: IT Concierge

• Supervisors “subscribe” to support
• Pay a fixed fee per term based on desired quantity of support
• Provides for a predictable fee and level of support
• Each group/faculty assigned a “Point of Contact” within the Research Support Group – that’s your “go to” person
• Other RSG staff will also help as needed
• Staff are familiar with Windows, Linux and Mac to varying degrees plus most system administration tasks, cluster management and software installation
• Speak to your PoC about software installations, OS upgrades, borrowing hardware, eg: PCs for experiments, extra screens, etc.
CSCF Help Desk

- We have a Help Desk who can handle certain tasks
  - Setting passwords
  - Loan of equipment – cables, display adapters, external drive bays, keyboards, mice
  - Assist with wireless issues
  - Take a problem report and get it assigned to appropriate staff
  - x31100, DC 2608 or cscfhelp@uwaterloo.ca

- https://cs.uwaterloo.ca/cscf/getting-help/help-desk
Compute Resources

• School Linux servers
  • linux.cs.uwaterloo.ca (Ubuntu 18.04)
  • linux.student.cs.uwaterloo.ca (for course work, Ubuntu 18.04)

• School Windows servers
  • windows.cs.uwaterloo.ca (available via RDP)
  • windows.student.cs.uwaterloo.ca
File Storage

• Ceph distributed cluster – 500TB total/500GB per student (more if you ask)
  • Home directory under linux.cs
  • P: drive under Windows.cs and Windows workstations
  • SMB(Windows network filesystem): //smb-files.cs.uwaterloo.ca
  • Amazon S3 buckets on request for object store

• Backup
  • files are backed up daily
  • Snapshots: cd .snapshot in any directory, files stored by hour, day, week
NextCloud (DropBox-like service)

• Locally stored
• Up to 500GB per grad student
• Access at vault.cs.uwaterloo.ca
• Download NextCloud clients
• Documentation: https://cs.uwaterloo.ca/twiki/view/CF/Vault
Web pages

- www.cs.uwaterloo.ca/~youruserid

- Files in NetApp folder under "~/public_html"
- Create / update index.html
- Make sure to assign "world read" to your web files
  - %chmod o+r index.html
Email

• youruserid@uwaterloo.ca

• Grad students automatically given an Office 365 account (Microsoft Exchange – Campus Email/Calendar tool)
• -> can redirect wherever you prefer
• Your own account (Gmail, Hotmail, etc)

• You can also configure a “friendly” email address, eg:
  • Lawrence.Folland@uwaterloo.ca
  • Do that in http://watiam.uwaterloo.ca
  • Manage Email Settings
Printing

• Can print to any of our printers listed on our CUPS server:
  • Or `\printers.cs.uwaterloo.ca` (in Windows)
    • (login with your CS-GENERAL\userid credentials)

• Setup notes:
  • [https://cs.uwaterloo.ca/twiki/view/CF/LinuxPrinting](https://cs.uwaterloo.ca/twiki/view/CF/LinuxPrinting)
  • [https://cs.uwaterloo.ca/twiki/view/CF/MacPrinting](https://cs.uwaterloo.ca/twiki/view/CF/MacPrinting)

• Note: printing is tracked but no longer quota limited

• [https://cs.uwaterloo.ca/cscf/services/printing](https://cs.uwaterloo.ca/cscf/services/printing)
High Performance Computing (SCS)

• Faculty-provided servers/clusters
  • Syn cluster – Salem/Wong/Brecht (Data Systems Group)
  • Ripple – Ian Goldberg (CrySP)
  • Tembo – Daudjee/Ozsu
  • CloudNetwork – Raouf Boutaba
  • Cabernet – Justin Wan (SciCom)
  • Chardonnay – Justin Wan (SciCom)
  • M160 – Ming Li (Bioinformatics)
  • Daytona – Poupart/Hoey/Lizotte (Health Informatics)
  • Husky - Ihab Ilyas (DB)
  • Novo – Bin Ma (Bioinformatics)
  • GPU systems abound ...
  • Various other servers

• https://cs.uwaterloo.ca/twiki/view/CF/HighPerformanceComputingResources
HPC - SHARCnet

• Compute Canada provides batch computing for large numbers of cores / memory
• 1 TB storage
• Requires a SHARCnet account based on faculty sponsorship (your supervisor needs to have an account to sponsor yours)
• There is no cost to use these resources
• Systems: [https://www.sharcnet.ca/my/systems/index](https://www.sharcnet.ca/my/systems/index)

• [https://cs.uwaterloo.ca/twiki/view/CF/HPC#SHARCnet](https://cs.uwaterloo.ca/twiki/view/CF/HPC#SHARCnet)
Software

• Windows – can be put on any Research / Teaching machine
• MS Office – campus license
• Visual Studio – free Academic license
• VMWare – Math license – covers vSphere Enterprise Plus, vCenter, vCloud Director, vCloud Suite, Workstation, Fusion, etc. – for research / teaching machines
• Maple – free for UW users
• MatLab – now covered by a campus-wide license
• Others – talk to your Point of Contact
Questions? Feedback?

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