

Using the Computer Science Cluster

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Computer Science (CS) High-Performance Computing (HPC) Cluster

- CS cluster has over 5200 nodes.
- Designed to run large scale computing jobs in **batch mode** (non-interactive mode).
 - **Limited graphics**-based interactive computing services.
- Users should set up their code to run in batch mode.
- Users who primarily need graphics-based interactive computing should use Economics Department cluster, ISD services, or desktop computers.

More information

- CS cluster webpage: http://hpc.cs.ucl.ac.uk/how_to_login/.
 - Get username and password from IT support,
- Econ GitHub page: <https://github.com/UCL/ECON-CLUSTER>
 - Contact Fatima or Andrew to be added to the UCL user group.
- If you need help,
 - CS support: cluster-support@cs.ucl.ac.uk
 - ECON IT support: economics.it@ucl.ac.uk

Obtain account

- Fill out and submit application form (see Fatima or Andrew).
- Wait 5-7 days and go to CS Cluster office: (4.20 Malet Place Engineering Building).
- They will set up two accounts
 - 1 CS departmental account (for remote access).
 - 2 CS Cluster account (to use cluster).
- By default, both accounts have same username and password.

Connect to cluster

There are three ways to connect to the cluster:

- 1 Connect using ThinLinc (graphical interface).
- 2 Connect using ssh (command line interface).
- 3 Connect using ftp (data transfer).

Connect using ThinLinc

Connecting using ThinLinc is a two-step process:

- ❶ Connect to a **CSRW** (Computer Science Remote Worker) using your **CS Department Account** username and password.
 - [Instructions to download Thinlinc.](#)
- ❷ Then connect to one of the cluster login nodes (“vic” or “wise”) using your **CS Cluster Account** username and password.
 - ❶ Open terminal inside CSRW window.
 - ❷ Then type one of the following
 - `ssh vic`
 - `ssh uctpXXX@vic`
 - ❸ Enter your cluster password.

Connect using ssh

- For remote access (i.e. when not connected to UCL network), connecting is a two step process:
 - ① Connect to “tails”, “storm” or “jet” using your **CS Department Account** username and password.
 - ② Connect to the cluster using your **CS Cluster Account** username and password.
- For access from within the UCL network (e.g. a desktop in Drayon House or the Econ HPC), skip step 1.

Connect to “tails”, “jet” or “storm”

- Open an ssh client (e.g. putty) or a terminal.
- Type
 - `ssh -X uctpXXX@tails.cs.ucl.ac.uk`
- Enter your CS dept. password.
- Note:
 - The option ‘-X’ allows graphics to be forwarded from the CS cluster to your computer.
 - The username “uctpXXX” is that given when you are assigned your CS department account.
 - The text after the ‘@’ is the address of the server.

Connect to the CS cluster from within CS network

- Logon to the CS cluster using ssh.
- Type
 - `ssh -X uctpXXX@vic`
- Enter your CS cluster password.

Connect to the CS disk storage using sftp

- To transfer files to cluster storage use sftp instead of ssh.
- Open a terminal or an FTP client.
- Type
 - `sftp uctpXXX@tails.cs.ucl.ac.uk`
- Enter your CS department password.
- From tails, you can directly access the CS data storage.
- For example, if you have previously requested CS to create a storage directory named “Nesheim-IO”, you can access this by typing:
 - `cd /slash/economics/research/Nesheim-IO`
- See below requesting CS data storage.

Log on to compute node: interactive session

Submit batch job to compute node: non-interactive session

Submit batch job to compute node: non-interactive session

Job status

Disk storage

Software available

Memory management

Graphics on jake or elwood

Cluster rules

- Never run jobs on head nodes (wise, vic, tails)
- Store important data and/or large data on /SAN/economics/...
- Avoid high frequency reading/writing of large datafiles to/from disk
- If you need support, send email to cluster support, go visit them in person.
- Update wiki page with tips for colleagues about how to solve common problems.
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