

Computing / IT in SPAT (Oct. 2013)



Introduction to computing and IT resources in SPAT

<http://www.sp.ph.ic.ac.uk/computing>

spathelp@imperial.ac.uk

Contents

SPAT Resources:
Hardware & Software
Linux Environment
Backups
Webpages



Departmental & College Resources:
Hardware & Software
Remote access
Library Journals



Information:

1. Accessing useful information
2. Getting help



SPAT Resources: Hardware – PCs & printers



Scanner PC located in H710

IC Domain – Log in using IC Username & Password



Printers on level 6M (H6M68)

HP Laserjet 4100DTN (Blackett lvl 10)

HP Color Laserjet CM4730 MFP

Printers on level 7 (H710)

HP Laserjet P4015

HP Color Laserjet 4700DN

Photocopier

<http://www.sp.ph.ic.ac.uk/computing/printing.html>

SPAT Resources: Hardware – Workstations



Workstations located in H710

Hostname	Processor / speed	Memory	Local disks
europa.sp.ph.ic.ac.uk	1x Ultrasparc 2i @ 300MHz	256MB	titan
gaia.sp.ph.ic.ac.uk	2x Ultrasparc 3 @ 750MHz	5GB	disk4, juno, rhea, ulysses
minerva.sp.ph.ic.ac.uk	1x Ultrasparc 2i @ 360MHz	512MB	disk1, disk2
neptune.sp.ph.ic.ac.uk	1x Ultrasparc 2 @ 360MHz	1GB	n/a
papageno.sp.ph.ic.ac.uk	1x Ultrasparc 2e @ 500MHz	1.6GB	disk1, disk2, disk3 (aka helios_d01, d02, d03)
zeus.sp.ph.ic.ac.uk	2x Ultrasparc 3 @ 750MHz	8GB	airs1, airs2, hebe, iris, modis

Note: The newest Sun was purchased in 2002 and is therefore now very old (the rest are *probably* going to take pride of place in the Science Museum shortly). When these computers finally break down, they will not be replaced.

http://www.sp.ph.ic.ac.uk/computing/solaris_workstations.html

HARDWARE – Linux NAS Servers



3 General Group NAS servers:
eos.sp.ph.ic.ac.uk (main server)
spatstorage.sp.ph.ic.ac.uk
spat-nas.sp.ph.ic.ac.uk

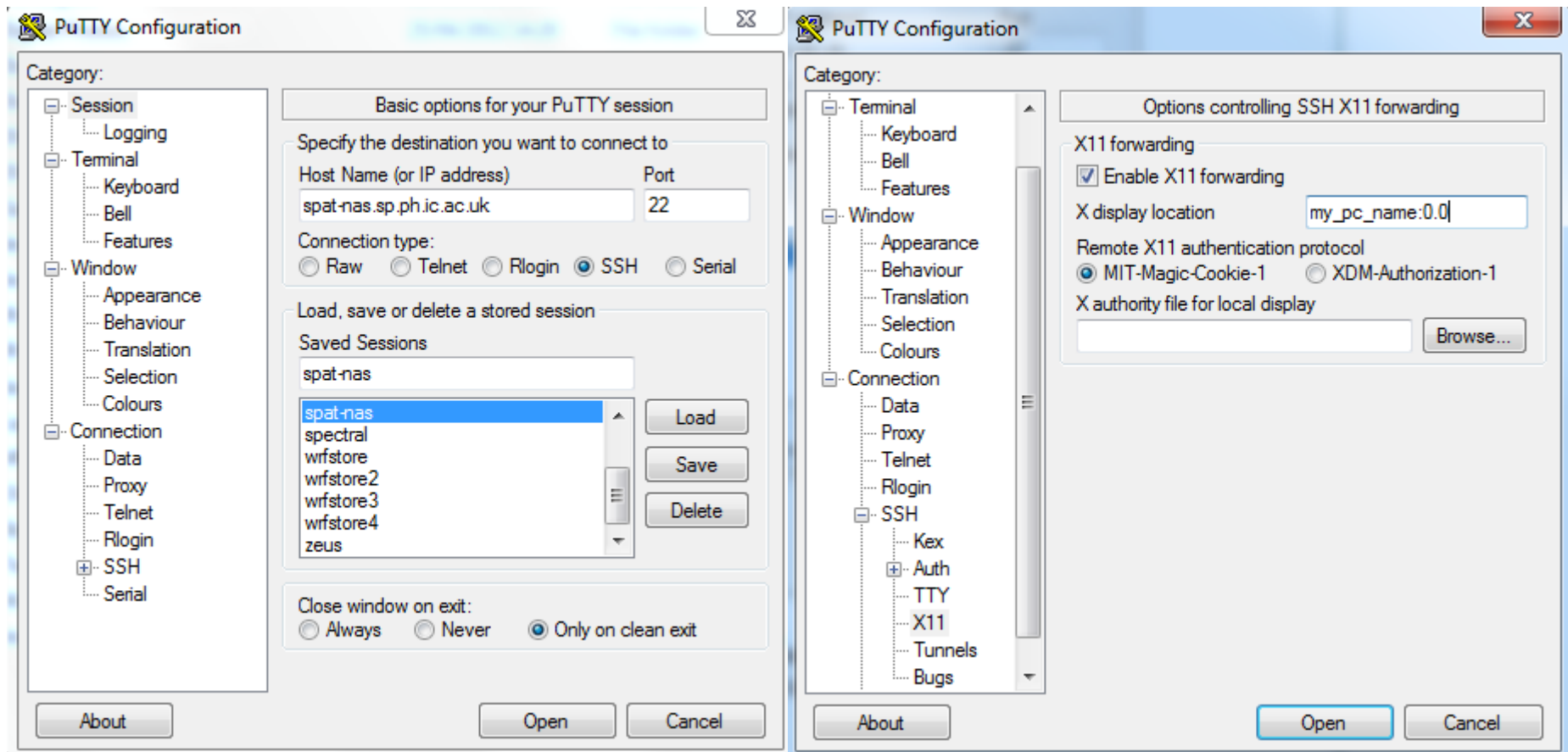
12 Dedicated Project NAS servers:
fennec-store.sp.ph.ic.ac.uk
spectral.sp.ph.ic.ac.uk
wrfstore.sp.ph.ic.ac.uk

Total > 0.5PB RAID-ed hard disk storage
100+ CPU Cores (non-parallelised)
System RAM 4-192GB

http://www.sp.ph.ic.ac.uk/computing/linux_servers.html

HARDWARE – Linux NAS Servers: access

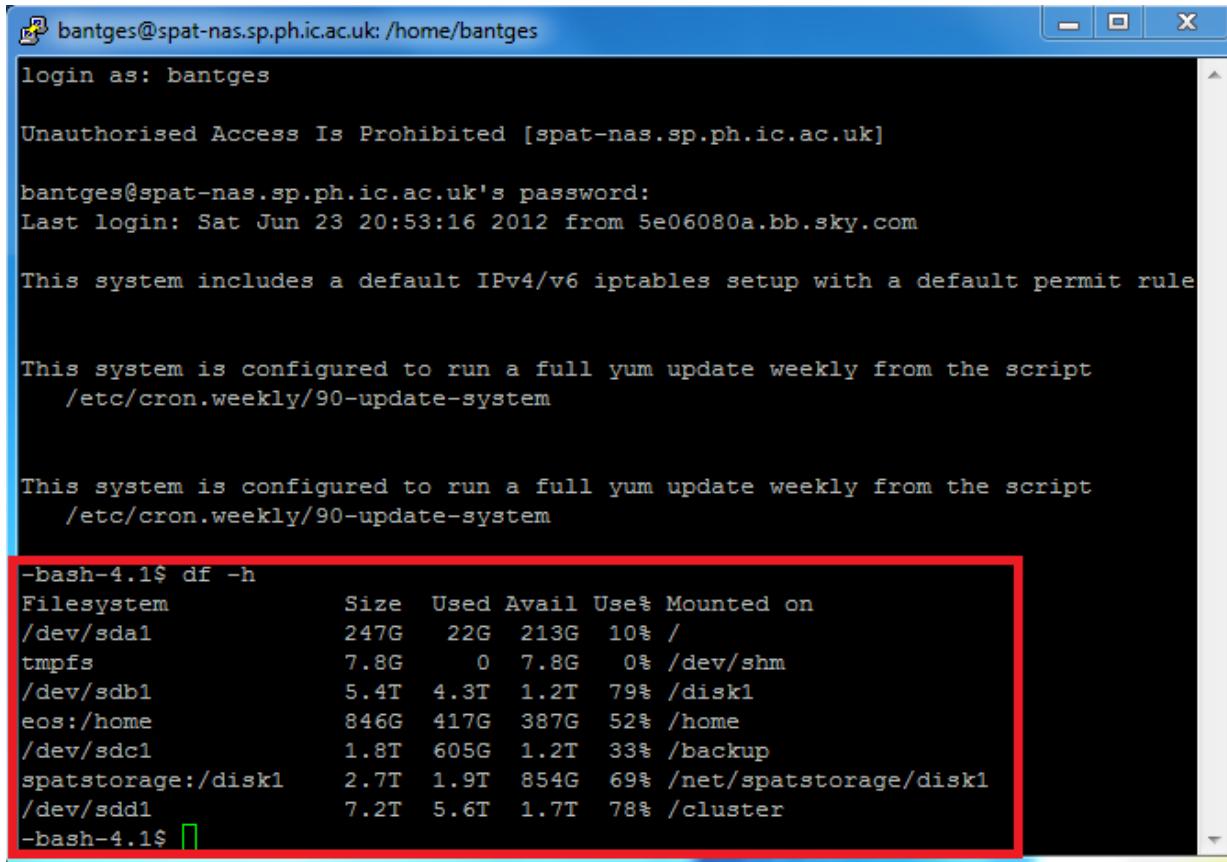
Accessing SPAT Linux NAS servers from Windows PC using “Putty”



http://www.sp.ph.ic.ac.uk/computing/accessing_linux_servers.html

HARDWARE – Linux NAS Servers: file systems

SPAT Linux NAS servers – file systems (/net/hostname/diskname)



A terminal window showing the login process for user 'bantges' on a SPAT Linux NAS server. The window title is 'bantges@spat-nas.sp.ph.ic.ac.uk: /home/bantges'. The output shows the login prompt, password prompt, and system messages. The final command executed is 'df -h', which displays the disk usage for various filesystems. The output is highlighted with a red box.

```
login as: bantges

Unauthorised Access Is Prohibited [spat-nas.sp.ph.ic.ac.uk]

bantges@spat-nas.sp.ph.ic.ac.uk's password:
Last login: Sat Jun 23 20:53:16 2012 from 5e06080a.bb.sky.com

This system includes a default IPv4/v6 iptables setup with a default permit rule

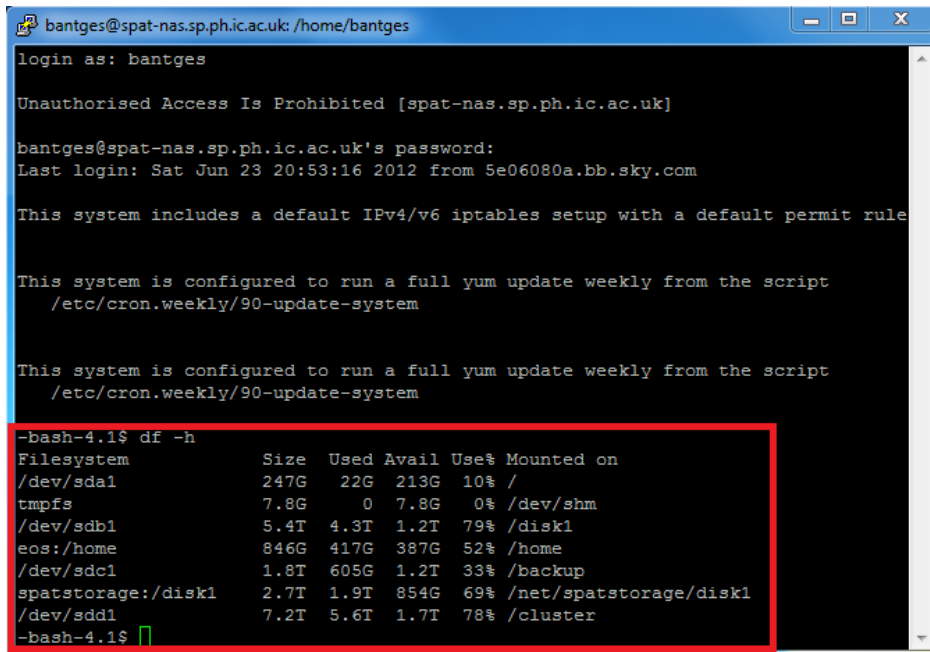
This system is configured to run a full yum update weekly from the script
/etc/cron.weekly/90-update-system

This system is configured to run a full yum update weekly from the script
/etc/cron.weekly/90-update-system

-bash-4.1$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       247G   22G  213G  10% /
tmpfs           7.8G    0   7.8G   0% /dev/shm
/dev/sdb1       5.4T   4.3T  1.2T  79% /disk1
eos:/home       846G  417G  387G  52% /home
/dev/sdc1       1.8T  605G  1.2T  33% /backup
spatstorage:/disk1 2.7T  1.9T  854G  69% /net/spatstorage/disk1
/dev/sdd1       7.2T   5.6T  1.7T  78% /cluster
-bash-4.1$
```

HARDWARE – Linux NAS Servers: free space & usage

SPAT Linux NAS servers – file systems (/net/hostname/diskname)



A terminal window showing system information and disk usage. The window title is 'bantges@spat-nas.sp.ph.ic.ac.uk: /home/bantges'. The output includes login information, system configuration, and a 'df -h' command output. The 'df -h' output is highlighted with a red box.

```
login as: bantges

Unauthorised Access Is Prohibited [spat-nas.sp.ph.ic.ac.uk]

bantges@spat-nas.sp.ph.ic.ac.uk's password:
Last login: Sat Jun 23 20:53:16 2012 from 5e06080a.bb.sky.com

This system includes a default IPv4/v6 iptables setup with a default permit rule

This system is configured to run a full yum update weekly from the script
/etc/cron.weekly/90-update-system

This system is configured to run a full yum update weekly from the script
/etc/cron.weekly/90-update-system

-bash-4.1$ df -h
Filesystem      Size  Used Avail Use% Mounted on
/dev/sda1       247G   22G  213G  10% /
tmpfs           7.8G    0  7.8G   0% /dev/shm
/dev/sdb1       5.4T   4.3T  1.2T  79% /disk1
eos:/home       846G  417G  387G  52% /home
/dev/sdc1       1.8T  605G  1.2T  33% /backup
spatstorage:/disk1 2.7T  1.9T  854G  69% /net/spatstorage/disk1
/dev/sdd1       7.2T   5.6T  1.7T  78% /cluster
-bash-4.1$
```

Finding out how much free space is available

Finding out your disk usage (e.g. /home/username)

```
-bash-4.1$ du -sh /home/bantges
3.9G   /home/bantges
-bash-4.1$ du -sm /home/bantges
3901   /home/bantges
-bash-4.1$
```

SOFTWARE – IDL, Exceed

Only 2 software packages: (install from spatstorage:/disk1/install

Exelis Vis IDL



IDL. Discover What's In Your Data.

IDL is the trusted scientific programming language used across disciplines to extract meaningful visualizations from complex numerical data. With IDL you can interpret your data, expedite discoveries, and deliver powerful applications to market. Additionally, IDL is a truly cross-platform solution, providing support for today's most popular operating systems, including Microsoft Windows®, Mac OS X, Linux, and Solaris.

Development Environment



Quickly create programs and build applications with the IDL Development Environment.

Language

```

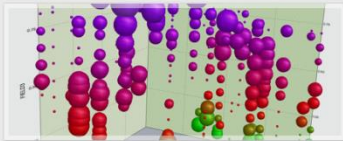
; Read an unformatted binary file containing digital elevation data
file = file_which('elevation.dat')
dem = read_binary(file, data_dims=[64,64])

; Display the elevations as a filled contour plot.
p = contour(dem, n_levels=15, rgb_table=27, /fill, plot=1)

; Change the color of the axes.
foreach ax, p.axes do ax.color = 'dark slate gray'
    
```

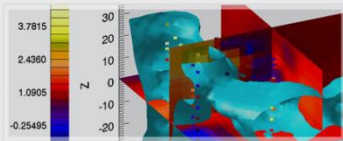
The IDL programming language is easy to learn, easy to use, and requires fewer lines of code than other programming languages.

Graphics



Create high-quality graphic data visualizations to help interpret your data.

Analysis



Get specific statistical, analytical, and numerical information from your data with IDL.

OpenText Exceed

OPENTEXT

Connectivity Solutions | Products | Solutions | Services | Customers | Partners | Downloads

Home > Products > Exceed Products > Exceed

Exceed

A market and technology leading PC X server that empowers Windows users with cost-effective access to X Window applications on UNIX and Linux hosts with unparalleled performance and strong security.

As the highest performing PC X server on the market, Exceed allows business users access to UNIX and Linux-based X Window applications from the comfort of their Windows desktop. For over 20 years, Exceed has been offering organizations options to reduce the complexity of their IT infrastructures. Gone are the days when Windows and expensive UNIX workstations had to share valuable office resources, Exceed cost-effectively replaces UNIX workstations. It improves user productivity through better data exchange among applications on different platforms, and streamlines business workflow.

As the leader in the PC X server market, Exceed continues to be the gold standard that others follow. With performance that is at least 10% faster than the closest competing solution, and with over 72% of the market share, Exceed is the de facto PC X server solution that 90% of Fortune 100 companies rely on. Whether they are designing automobiles or aircraft, accessing medical imagery, managing financial risks, or monitoring massive transit systems, Exceed is at the heart of the process.

To ensure tight integration with corporate security policies and industry regulations, Exceed is certified for Microsoft Windows Vista. It comes equipped with a FIPS 140-2 validated cryptographic module to ensure secure connections.

Key Features and Benefits:

Speed	X Server
-------	----------

Trial and Purchase

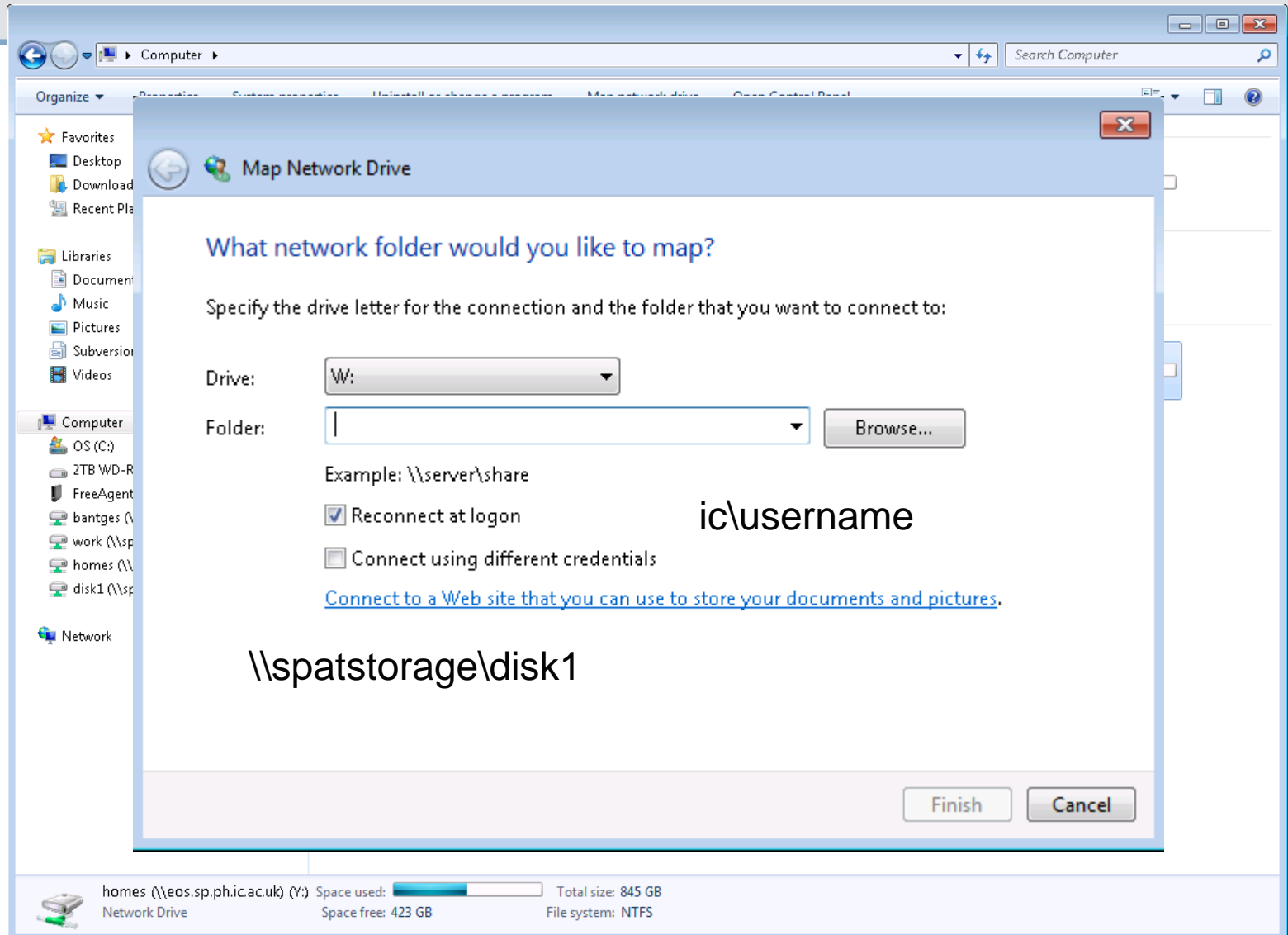
TRY BUY

Collaterals

What's new in Open Text Connectivity 14 (PDF, 614 KB)

Managed File Transfer

BACKUPS / DR: Mapping a network drive



Webpages

1. “Personal” Webpage on local SPAT server:

http://www.sp.ph.ic.ac.uk/computing/setting_up_my_personal_webpage.html

2. Professional Webpage (PWP) on College Webservers:

PWPs are mini websites containing professional details such as research interests, publications and honours and memberships. They are available for all staff (academic and non-academic) and post-graduate researchers. They consist of a home page and four sub-pages (Honours & Memberships, Research, Publications and Teaching).

<http://wwwf.imperial.ac.uk/blog/webguide/2013/06/04/what-are-professional-web-pages-pwps-2/>

Departmental & College Resources

Department of Physics

[Home](#) | [About](#) | [News and Events](#) | [Research](#) | [Students](#) | [Staff Info](#) | [Safety](#) | [Contacts](#)

Department of Physics

[Home](#) | [About](#) | [News and Events](#) | [Research](#) | [Students](#) | [Staff Info](#) | [Safety](#) | [Contacts](#)



[→ Back to Physics](#)
[→ Back to Staff Info](#)

Computing Committee

[Group Representatives for Computing around the Department](#)



Software

[Licensing Information. How do I get software?](#)



Storage Space

[What is available to you? How do you get more?](#)



Printing

[Printing facilities around the department](#)



Buying Computers

[How do you buy? What should you buy?](#)

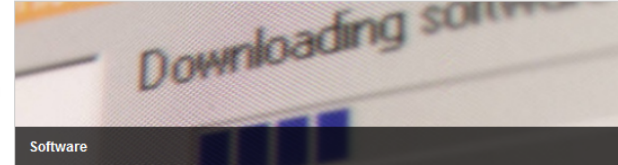


Help!!!

[Where can I get help from?](#)



[→ Back to Physics](#)
[→ Back to Staff Info](#)
[→ Back to Computing](#)



Software

Mathematica

To obtain Mathematica please visit the following links – this will allow you to download a trial version and send a request to Imperial for a full license. Once you get the full license you can use it with the trial copy – you don't need to reinstall.

- [Student](#)
- [Staff](#)

Intel Compilers and Labview

The Intel compilers and Labview are free for all staff and postgraduate students to install on College owned computers. Please contact the [Service Desk](#) if you would like them to be installed.

Matlab

Matlab is free for all staff and students – registration details differ depending on your status but the [information is on the ICT website](#)

Other software

A range of other software is available – check the [Software Shop website](#), or contact the Service Desk for [more details](#).

ICT Software Shop

- Range of software available free to download and install on College-owned systems
- Additional software available for purchase

Information & Communication Technologies ICT

Home | Services | Service Desk | Information for new users | About us | Search ICT

Software shop price lists

The Shop is open for sales between 9.30am - 4.30pm Monday to Friday (Except Wednesdays 10.00am - 4.30pm), ICT 4th Floor Open Plan West, Imperial College London, Sherfield Building, London, SW7 2AZ, extn 49004, (020) 7594 9004, email ict-shop@imperial.ac.uk

For further information on the products that we sell, please click on any of the items below

Free Software Downloads

- available to members of Imperial College staff and full time Postgraduate Research students only on Imperial College owned systems (*all full time members of College can register for a single home installation of AntiVirus software)
- [Accessibility suite for W3C/WCAG for Macromedia Dreamweaver](#)
- [AntiVirus Software*](#)
- [CCDC](#)
- [ClaroRead](#)
- [EndNote](#)
- [Mestrenova](#)
- [Microsoft Campus Agreement](#)
- [MindView](#)
- [Realplayer](#)
- [Reference Manager](#)
- [Scifinder](#)
- [Secure Shell & FTP](#)

- [Back to ICT](#)
- [Back to Services](#)
- [Back to Software and hardware support](#)
- [Back to Software Purchase](#)
- [Back to Software Shop](#)

Price Index

- [Accessibility Suite For W3C WCAG For Macromedia dreamweaver](#)
- [Adobe](#)
- [AntiVirus](#)
- [Autodesk Education Community](#)
- [CCDC](#)
- ☑ [Chem Bio 3D Ultra 12.0](#)
- [CHEST Site Licences](#)
- [ClaroRead](#)
- [Corel](#)
- [Educational Discounted Software](#)
- [Filemaker Pro Scheme](#)
- [IDL](#)
- [Intel Compilers](#)
- [LabVIEW](#)
- [Malwarebytes](#)
- [Maple](#)
- [Mathematica](#)
- [Mathtype](#)
- ☑ [Matlab Licence Scheme](#)
- [Mestrenova](#)
- ☑ [Microsoft Campus Agreement](#)
- [Microsoft Select Software](#)
- [MindView 5](#)
- [Minitab](#)
- [Oracle Licensing](#)
- ☑ [Origin](#)
- [Paint Shop Pro](#)
- [PGP Encryption Software](#)
- [Pro Engineer](#)
- [RealPlayer](#)
- [Red Hat Linux](#)
- [Reference Manager and Endnote](#)
- [Respondus and Studymate](#)
- [Salford Fortran](#)
- [Scifinder](#)
- [Secure Shell & FTP](#)
- [SPSS](#)
- [SPSS Science Products](#)
- [STATA](#)

Software pricelists, product information and printable licence forms

- [Adobe Licensing Scheme](#) (Acrobat, Photoshop, Creative Suite etc)
- [AutoDesk Education Community](#) (AutoCAD etc)
- [ChemBio3D Ultra 12.0](#)
- [Chest Site Licences](#) (ArcGIS, Exceed, NAG, SAS)
- [Corel Licensing Scheme](#)
- [Educational Discounted Software](#)
- [Filemaker Pro scheme](#)
- [IDL](#)
- [Intel Compilers](#)
- [LabView](#)
- [Malwarebytes](#)
- [Maple Site Licence](#)
- [Mathematica Licence](#)
- [Mathtype](#)
- [Matlab TAH Site Licence](#)
- [Microsoft Select Software](#) - please also see Microsoft Campus Agreement
- [Minitab](#)

<http://www3.imperial.ac.uk/ict/services/softwarehardware>

ASK ICT

College-wide service status

Imperial College London

→ Return to the Imperial homepage

For: Prospective Students → Students → Alumni → Staff → Business → Media → Search Google Go People

ASK ICT

Home | FAQ | Make a request | Report a fault | Service status | My contacts | My requests | My orders | My reports

Welcome, Guest

Log In

Search

→ Back to ASK ICT

Service status

→ Bulletin

Service status

Live status | Recently resolved

Key Service

✓	Applications, Software and Systems
✓	College Web Pages
✓	Core Infrastructure - Servers, Platforms
✓	Email and Messaging
✓	File Management and Backup Services
✓	Network Services
✓	Other ICT Services
✓	Phones and Mobile Devices
✓	Printing
✓	Teaching, Learning and Lecture Theatres
✓	Username and Access Management
✓	Viruses and Security

Changes in progress

+	Change freeze consideration for REF systems, associated REF systems and underlying infrastructure
---	---

Main campus address:
Imperial College London, South Kensington Campus, London SW7 2AZ, tel: +44 (0)20 7589 5111
[Campus maps and information](#) | [About this site](#) | [Use of cookies](#)

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<https://imperial.service-now.com/ict/status.do>

Departmental & College Resources: Data Centres



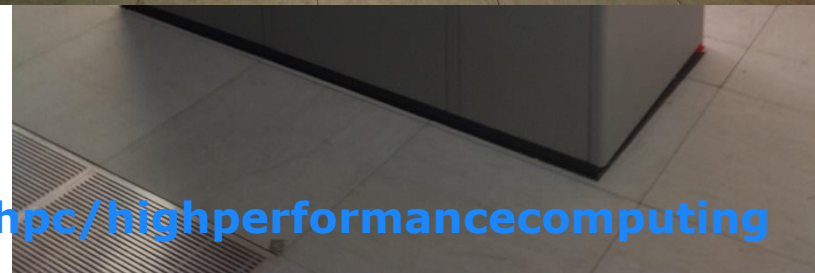
Hosted Servers

College HPC (CX1 & CX2) (0.5PB storage)

CX1: 960 cores, 72 cores max*, 48GB

CX2: 4120 cores, 1152 cores max*, 48GB

<http://www3.imperial.ac.uk/ict/services/hpc/highperformancecomputing>



Departmental & College Resources: Data Centres

SAF Data Centre

Hosted Servers
(DR Systems)



Departmental & College Resources: Condor (Cloud computing)

<https://htcondor.cc.ic.ac.uk/htcondor>

Imperial College London

Research | Courses | Faculties & Departments | Campus Life | News & Events | Admin & Services | About Imperial

For: Prospective Students → Students → Alumni → Staff → Business → Media → Search Google Go People

HTCondor

Home FAQ About HTCondor

First, choose the type of job you want to run:

- [Abaqus](#) - please note this is still in testing
- [Your own exe/cmd/bat file](#)
- [Matlab](#)
- [R statistics](#)
- [Star CCM](#)
- [Show the job queue and system status](#)

Main campus address:
Imperial College London, South Kensington Campus, London SW7 2AZ, tel: +44 (0)20 7589 5111

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- Utilises UG teaching clusters PCs (8GB RAM, 4-8 cores)
- Max 2GB data
- ~3700 processing slots
- Limited software support
- Run time dependent on usage (idle CPUs)

<https://htcondor.cc.ic.ac.uk/htcondor/About.aspx>

Remote Access to College Systems / PCs

1. Access to SPAT Linux servers – restricted to those which are accessible through the College firewall via SSH (Port 22). Otherwise, accessible using the College VPN service, or via your desktop PC using Remote Desktop connection.
 - spat-nas.sp.ph.ic.ac.uk accessible through College firewall
2. Windows Desktop PC – Access through College RDG

Imperial College London

Information & Communication Technologies ICT

Home | Services | Service Desk | Information for new users | About us | Search ICT

Remote Desktop Gateway

Our remote desktop g (terminal services) will technology as used to use it from hotels and

You may need to wake your PC first before being able to connect to it with <http://www.imperial.ac.uk/wakempc>

Supported clients

Windows XP SP3 and above (see below for configuration instructions).

Mac & Linux via [separate paid-for application](#). ITap RDP.

The [ITap RDP app](#) for iOS devices (iPad, iPhone etc.) supports remote desktop gateways via an additional in-app purchase, but please note we can't offer any support for this application. Please see our [separate page on configuring ITap RDP](#).

<http://www3.imperial.ac.uk/ict/homeworking>

RD Gateway Server Settings

Remote Desktop Connection

Connection settings

Automatically detect RD Gateway server settings

Use these RD Gateway server settings:

Server name:

Do not use an RD Gateway server

Logon settings

User name: None specified

You will be asked for credentials when you connect to this RD Gateway server.

Use my RD Gateway credentials for the remote computer

[What is an RD Gateway server and how do I know if I need one?](#)

OK Cancel

Remote Access to College Library Services

1. You no longer need to connect to the College VPN service to access Library Journals etc.

<http://iclibezp1.cc.ic.ac.uk/login?url=http://www.webofknowledge.com>

Web of Knowledge off-site access problems

by Janet Corcoran
01 March 2013



Access via UK Federation to Web of Knowledge is unavailable - please use this alternative link

UK Federation access to Web of Knowledge is currently unavailable. Please use this link if you are trying to access it from off-site and select "IP access".

<http://iclibezp1.cc.ic.ac.uk/login?url=http://www.webofknowledge.com>

This problem is expected to be fixed after April 2013.

- Be the first to comment
- Share this
- Tweet this
- Stumble this
- Google Plus
- Share on LinkedIn
- Email a friend
- Print this story

MORE

[the Library](#)

[College and campus](#)

Imperial College
London

Please enter your College username:

Please enter your College password:

Login

Exchanging / transferring large files

Information & Communication Technologies ICT

Welcome to FileExchange

This site allows you to exchange files with other people in circumstances when using email is not appropriate (e.g. sending large files or executables).

Questions relating to this system should be directed to it-security-officer@imperial.ac.uk

FileExchange

Features

- Upload of multiple files
- Sending to multiple recipients
- Ability to list all uploaded files
- Notifications when a file has been collected
- Verification of external users, to prevent malicious use of the service
- Manually delete files

If you do not wish to try the new service, and want to continue to use the old FileExchange Service, you can do so using the link below:

[Old FileExchange](#) - The old FileExchange service will be decommissioned on 04/02/2013

IMPORTANT! If you use this service to transfer sensitive data, you should ensure it is adequately protected using a strong encryption product.

©2012 Imperial College London

<https://fileexchange.imperial.ac.uk/>

- Current limit 2GB
- I can temporarily enable larger transfer via http or https

IMPORTANT! If you use this service to transfer sensitive data, you should ensure it is adequately protected using a strong encryption product.



[Group computing home](#)

Hardware

[Sun SOLARIS workstations](#)

[RedHat Linux Servers](#)

[Printing & Photocopying](#)

Soft

[SPAT Spec](#)

[Imperial](#)

[Free \(GNU](#)

FAQs

[Getting help](#)

[Accessing Sun Workstations](#)

[Accessing Linux Servers](#)

[Linux filesystems /net/hostname](#)

[How much disk space am I using?](#)

[Setting up my personal webpage](#)

[Computing equipment purchase](#)

[Computing equipment disposal](#)

SITE INFO

These pages are maintained by

"spathelp"

Email: spathelp@imperial.ac.uk

Space & Atmospheric Physics

Group Specific Computing Information

Last updated: 16th April 2013

You are in: [Group computing home](#)

The information contained in these local webpages are designed to help you understand what local computing facilities we have, how to access them and also what software is available as a member of the [SPAT Physics](#) Group.

See [Imperial College ICT webpages](#) for most of your general IT software that is available to members of Imperial College.

Information from ICT about working from home can be found [here](#).
Department computing webpages can be found [here](#).

Software packages are:

OpenText eXceed (X Windows software, previously known as Hummingbird eXceed)

Exelis VIS IDL

Mathworks MATLAB

Microsoft Office (Word, Excel, Powerpoint, etc.)

Microsoft Windows Operating Systems (Windows 7, 8 upgrades)

Symantec Endpoint (Antivirus)

NB: Microsoft Visual Studio ** No longer covered by the Microsoft Campus Agreement **

At present, **only** the eXceed and IDL software are distributed via SPAT (email spathelp@imperial.ac.uk), the remaining software should be obtained directly from the [ICT Software Shop](#).

3 Mailing Lists for SPAT
spat@imperial.ac.uk
atmos@imperial.ac.uk
space@imperial.ac.uk