PC Computing

Department of Statistics
University of Oxford

Contents

Introduction

This document provides a guide to the services available in the Department of Statistics.

The MSc Computing Room (1.207) has 20 PCs running Microsoft Windows XP Professional Service Pack 3. These machines are named `lab01.stats.ox.ac.uk` to `lab20.stats.ox.ac.uk`, having one Intel Pentium 4 3.0 GHz processor and 1 GByte of RAM. The authentication (password checking) is provided by two systems running Microsoft Windows Server 2003 R2 and the main file server is a SUN Solaris 8 machine. A Hewlett Packard LaserJet 4350 printer is also available in the room. There are other 10 publicly available machines in the Computing Room (first floor, 2 South Parks Road) with a similar configuration.

The PCs have several software packages installed, including Microsoft Office 2003 Professional, Internet Explorer 7, Visual Studio 2005, Mozilla Firefox, MikTeX, TeXnicCenter, R and Hummingbird Exceed. The latest version of Sophos Anti-Virus is also installed and updated automatically.

Logging on

To use any of the PCs you first have to log on and start a session. This will allow you access to your personal files and use any of the software in the system.

- When first encountered the PC might be in a "sleep" state with its monitor blanked (or even turned off). Moving the mouse or clicking any key will "wake" it up.
- When the screen displays a window titled Welcome to Windows on top of the Windows XP logo, press the Control (Ctrl), Alternate (Alt) and Delete (Del or Delete) keys on your keyboard at the same time. This shows the Log On to Windows window, which has three textboxes[1] and four buttons[2].
- Move the mouse so that the arrow pointer on the screen hovers over the topmost textbox and press the left button on the mouse once[3]. A vertical blinking line ("the cursor") appears among the text on the textbox[4]; use the arrow and backspace keys on the keyboard to delete all the text in the textbox.

[1] A textbox is a rectangular white space inside a window where text can be typed.
[2] A button is a raised rectangular space that will react when the mouse is clicked with the arrow pointer over it.
[3] This is usually called "clicking".

- Type your username[5] on the keyboard and see it appear on the topmost textbox.
- Press the Tab key (⇤⇥) to switch the cursor to the middle textbox and type in your password.
- Pressing the Tab key again will highlight the lower textbox; this should **always** be STATS, if it is not, use the up or down arrow keys (↑/↓) twice to change it.
- Once all the textboxes have the right information in them, press the Enter key (↵) or move the arrow pointer over the OK button and click on the left mouse button. This starts your logging in process.

The system will take a few seconds (up to 30 seconds if it is the very first time) to log you in. Once logged in you will see your desktop on the screen, which should look like Figure 1.

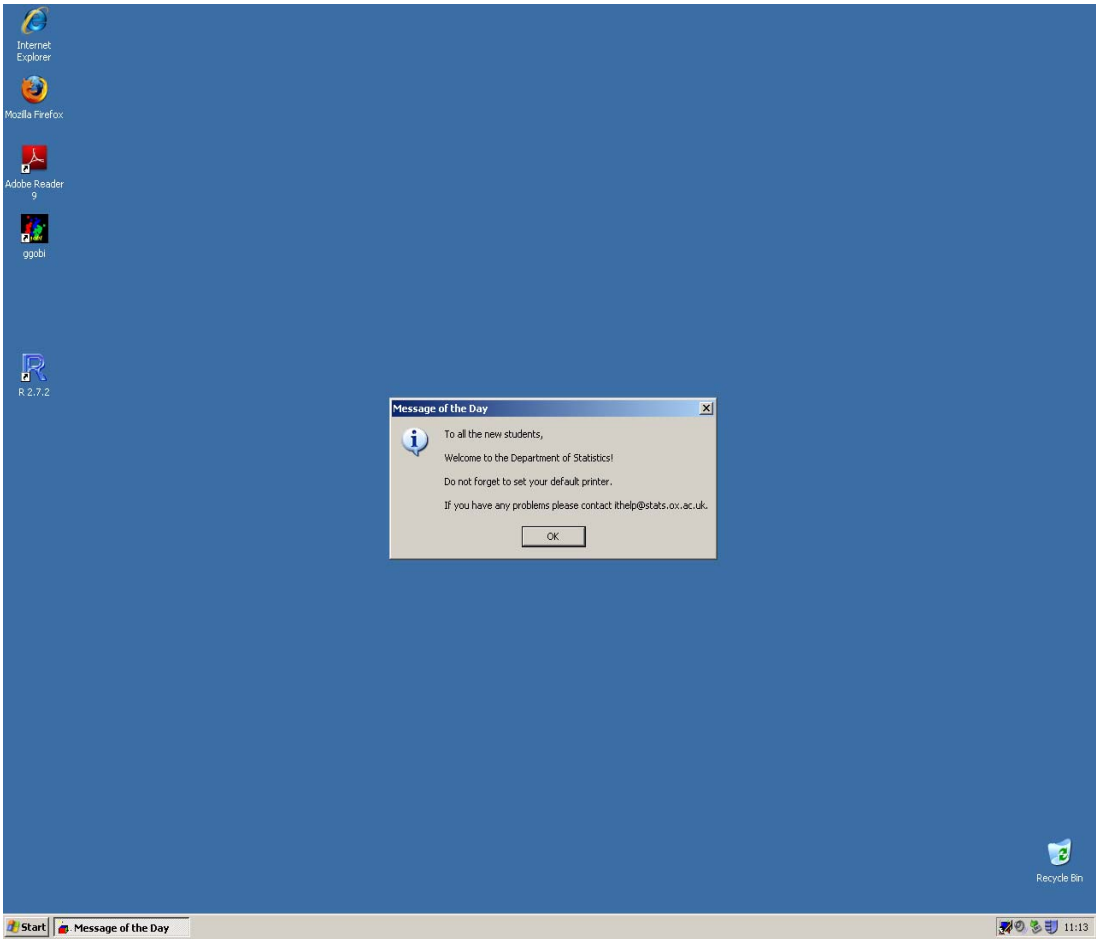

Figure 1. Your desktop

In the centre of the screen there may be a blue and grey box titled Message of the Day, showing information concerning the Department we find useful to bring to your attention; the message will change over time or may be absent sometimes. Click on the OK button to get rid of the message.

The bottom grey strip is called the taskbar and will show a button-like rectangle for each application you are running; clicking on a button brings its application to the front on the desktop. At the left of the taskbar we have the Start button. Clicking it will show a menu; the most important option is All Programs. When this option is clicked another menu will appear showing all the applications installed on the computer; moving up and down the menu and clicking on one will start that application.

If the All Programs menu shows a couple of downward-pointing chevrons at the bottom, that means that it is only showing your most-used options; clicking on the chevrons will show all the possible options again. The systems will only exhibit this behaviour after a few sessions.

On your desktop there are several icons, the number of which will depend on the machine you have logged into and the type of your account. Of these icons, there are three you should note:

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[4] The cursor is the vertical thin line that marks where whatever you type on the keyboard will be inserted.

[5] We have provided you with a username and password. The first identifies you for the computers and is normally based on your surname. The password is a string of numbers and letters that verifies your username. Remember both for the future and do not let ***anyone*** see them!

R 2.7.2
: This is the statistical application the MSc students will be using most for their lectures and practical exercises.

Recycle Bin
: Files deleted from local drives are placed here. Only when you open[6] it and click on the Empty the Recycle Bin option on the left are files really deleted from the system. Files deleted from the Recycle Bin are **not recoverable**.

STATS
: This icon allows you access to networked file stores distributed all over the Department.

Where do I put my files?

Click on the Start button and select the All Programs and Accessories options. Click on the Windows Explorer icon; this opens a window like Figure 2. On the left side of the window you have a panel showing a tree-like list of all the drives accessible to the system; on the right a list of the files and folders in your My Documents folder. Clicking once on the + symbol besides a drive expands the tree structure to show all folders in that drive, and clicking once on the name of a drive or folder shows all its contents on the right-hand panel.

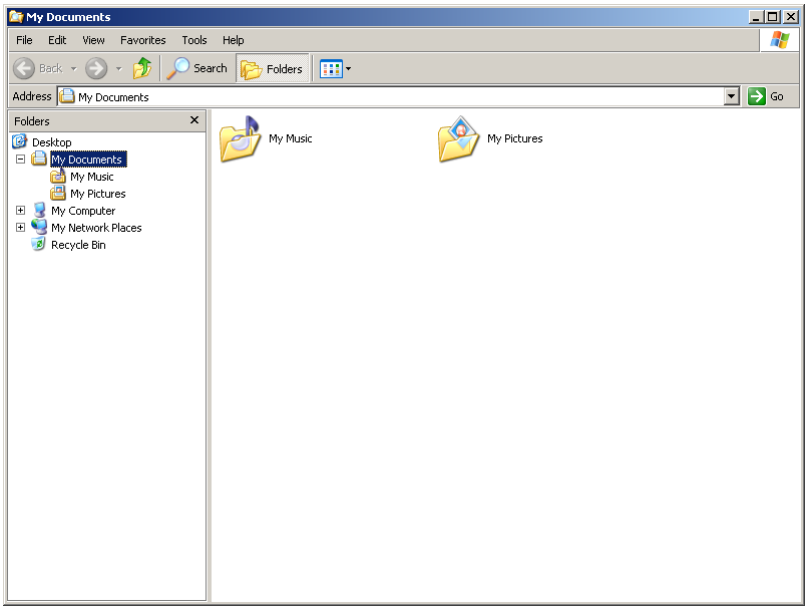

Figure 2. A Windows Explorer window

Expand the My Computer tree by clicking on the + symbol and highlight or select[7] the Homes on 'stats.ox.ac.uk\Statsdfs\Stats' (P:) drive. This is your personal or home directory[8] where you can store all your files.

Everyday at 7 in the evening, all the contents of your home directory are backed up to magnetic tape by our central servers. Should you delete or overwrite the wrong file, we can recover it for you; you just need to let us know as soon as possible where the file was and when was it last changed (except for the change the prompted your request, that is). It is important to note that:

- if the file you want to recover has never been in your home directory at 7 in the evening some day, it is **not** possible for us to recover it;
- files saved to the local drives (as opposed to the networked drives) are **not** backed up, and hence **cannot** be recovered at all; and
- due to disk-size limitations in our servers, your home directory has a total size **quota of 400 MB**; should you go beyond that limit, you will receive an e-mail warning you and giving you a time limit to reduce your usage.

[6] By double-clicking on it with the left button of your mouse.
[7] By clicking once on it.
[8] Another name for folders or drives.

Creating a new folder

To create a new folder on your P: drive you should follow these steps:

- Highlight on the left panel the P: drive or a folder in it; its contents will appear on the right-hand panel.
- Click on the File menu at the top-left of the window and select the New option.
- Click on Folder in the menu that appears. This will create a folder icon in the right-hand panel of the window with the name New Folder highlighted in blue.
- Type the name you want for the folder and press the Enter key.

Double-clicking on the new folder will show you its contents, in this case none. To delete a folder you only have to select it and press the Delete button on your keyboard.

There are several folders and files in your home directory that should **never** be touched directly: oemail, My Documents, mbox and pub_html. These folders contain configuration files for e-mail, web pages and your default Windows folder. If changed they could prevent you from reading your mail, or even cause you to lose your data. The My Documents folder should also not be deleted, though it can be emptied if you do not want to use it.

Closing applications

You can close any application by clicking on the ☒ button at the top-right corner of its window. Also, most applications have Close or Exit options in their File menu. Close the Windows Explorer window.

Printing

There are several printers distributed around the Department (we aim to have one per floor); these printers are all networked so any user can print to them and each one has its own network name. The one in the MSc Computing Room is named spr1_1, and MSc students should use that one to do their printing.

To make spr1_1 your default printer (the printer all your applications will try to print to) you must open the Printers and Faxes icon in your Start menu. A window with a list of printers will appear.

Right-click on the **spr1_1 on stats-win-svr1** printer and select the **Set as Default Printer** option from the menu. A black circle with a white tick will appear besides that printer; from now on all your applications will use that printer.

Close the window.

E-mail

Everyone in the Department is given an e-mail address together with their username and password. The information necessary to configure your e-mail client to read this mailbox is online at:

http://www.stats.ox.ac.uk/about_us/it_information/restrictedaccess/email_faq/emailclients

This e-mail account is different and separate from the one given to you by your college, and that is most likely managed by Oxford University Computing Services. Enquiries about your college e-mail should be directed to their Help Centre (http://www.oucs.ox.ac.uk/helpcentre/).

Should you wish to check only one e-mail account for all your Oxford communications, you can ask us to forward your Statistics e-mail to your college mailbox, or ask them to forward it to ours. Either way, make sure you check your e-mail often enough as announcements concerning academic issues (lectures, seminars, timetables, etc.) will be made through e-mail messages.

Webmail

The Department offers access to a web server allowing you to read your e-mail from anywhere in the World. This service only needs an Internet connection and a modern web browser to use it.

- Double-click on the Internet Explorer icon (or click on the Start button and select the All Programs and Internet Explorer options); a web browser window like Figure 3 will appear.

Figure 3. Internet Explorer window

- Delete the contents in the Address bar at the top of the window and replace them by https://webmail.stats.ox.ac.uk.

Figure 4. Typing the web page

- Press the Enter key.
- The browser window should change to one like Figure 5; type in your username and password as before and click on Login.

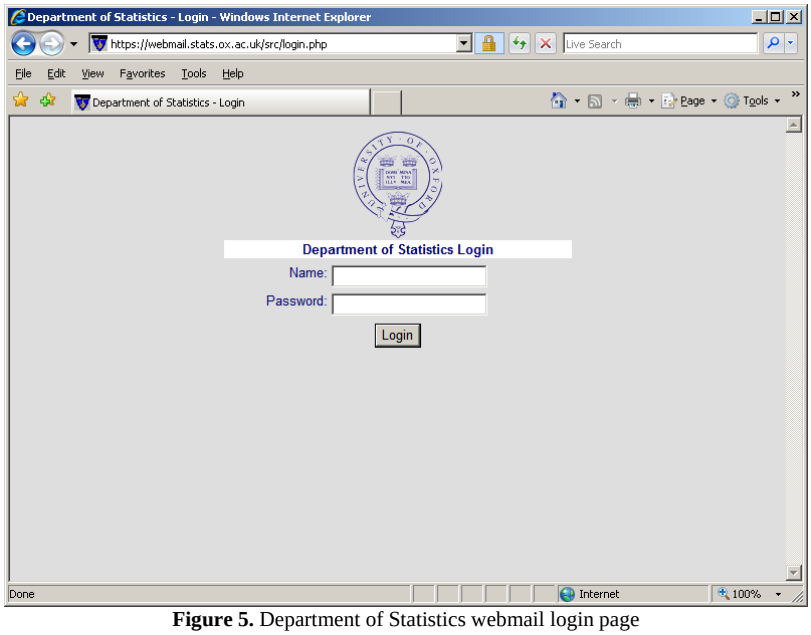

Figure 5. Department of Statistics webmail login page

- The browser window will show your mail folders on the left and your Inbox messages on the main panel like in Figure 6.

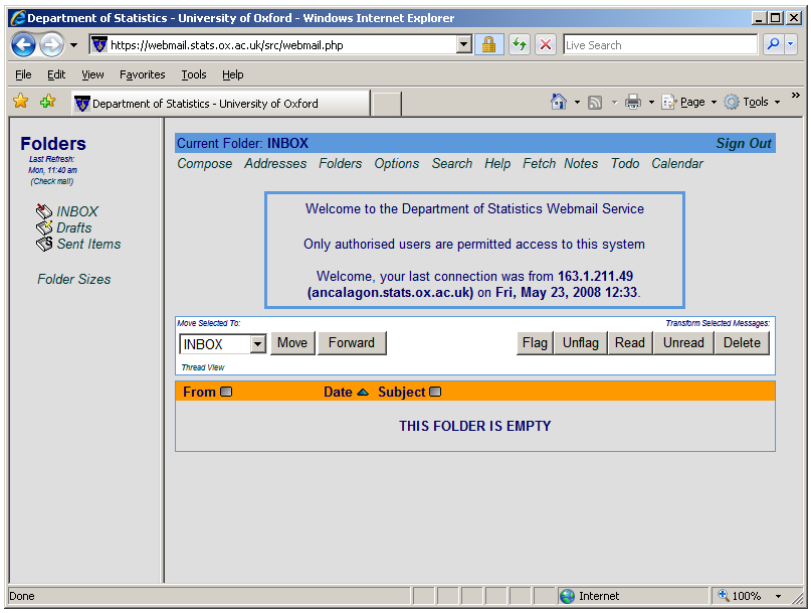

Figure 6. Logged in webmail

- You can read your messages by clicking on their Subject lines, or compose new ones by clicking on the *Compose* link at the top; check the *Help* link for more details.
- Once you have finished, please log out from the webmail **before** you close the browser window; you can do so by clicking on the *Sign Out* link at the top of the window.

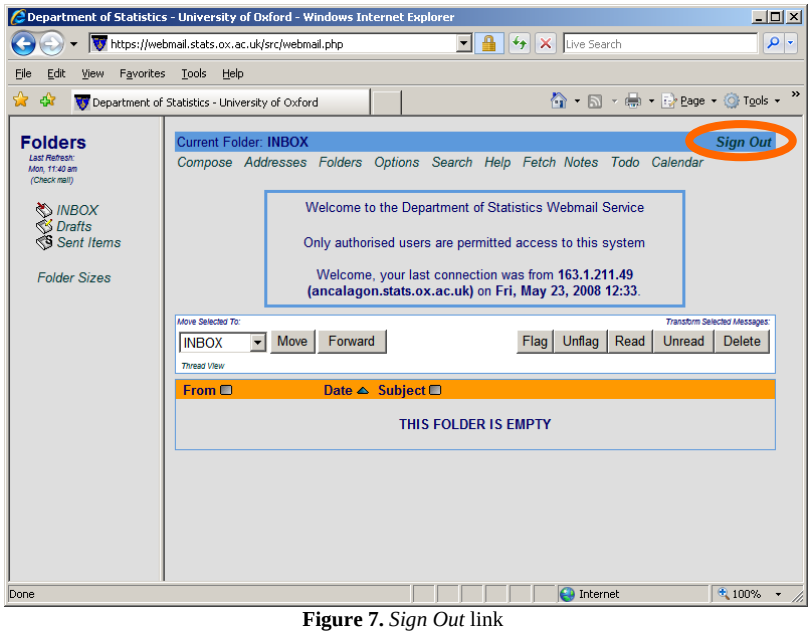

Figure 7. *Sign Out* link

R

The application you are going to use most is The R Project's R program (see http://www.r-project.org/ for more information). To open it, click on the blue R 2.7.2 icon in the Start menu, under All Programs and R 2.7.2. This will show a grey window with a smaller white one inside it, the large one is entitled RGui and the smaller R Console.

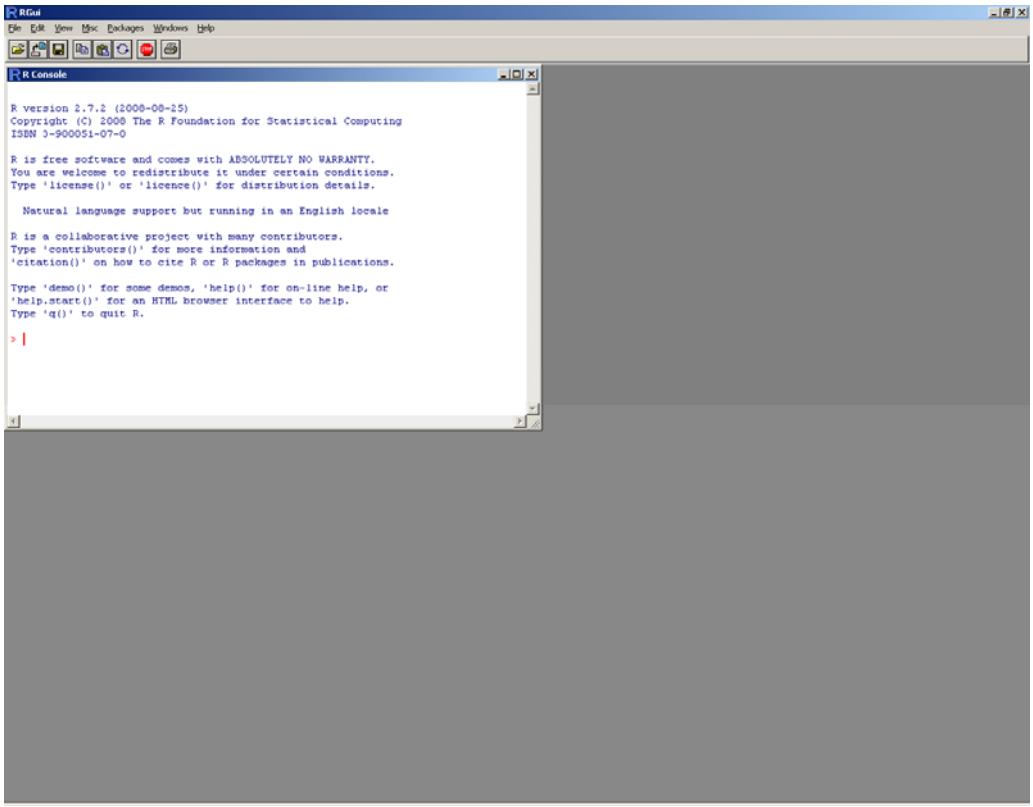

Figure 8. R window

On the R Console window you can enter commands for the application to run. Later in your course you will have a seminar on the use of R; so today we will only try one command: `plot`.

- The cursor should be inside the R Console window, besides the > symbol[9]. Type in `plot(1,1)` and press the Enter key.
- A new window appears on top inside the R main window, which now looks like Figure 9. It is a graph with a set of coordinates and a small circle in the centre at coordinate position x=1, y=1.
- Close the R Graphics: Device 2 (ACTIVE) window.
- Close R.
- Answer No to saving the workspace[10].

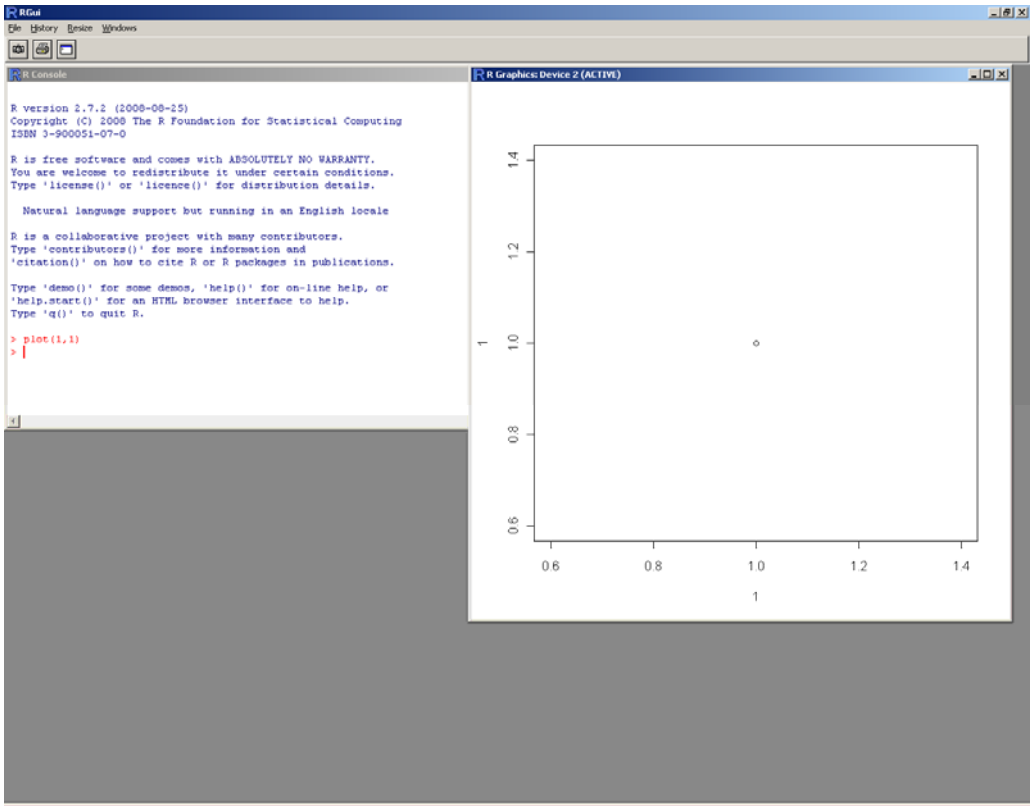

Figure 9. R window with a plot window on top

Logging out

Once you have finished and closed all the applications you have used you have to end your session with Windows XP. To do so you have to log out of your account:

- Click on the Start button on the left of the taskbar and click on the Log Off option.
- The screen greys out and a window asking you to confirm the move appears.
- Click on the Log Off button and your logging out process will start.

Normally it takes between several seconds to half a minute to log out from the system as your profile is updated in the main server. If it takes more than two minutes, call us.

Difference between logging out, rebooting and shutting down

As we have seen confusion among students in previous years, we would like to clarify these terms:

[9] If the Commands window appears blank, click once on it.
[10] The meaning of this will be explained to you later.

Logging out

This is the process by which you finish your session on the computer and leave it ready for any other person to use it. It is performed as explained in the previous section and you should **always log out** when you have finished working for the day.

Rebooting

This process not only terminates your session, but also makes Windows reload itself completely; it may be performed only at the request of the IT Staff for installing new software or loading new configurations. You reboot a Windows system by clicking on Shut Down in the Start menu, selecting Restart in the Shut Down Windows window, and clicking on OK.

Shutting down

When a computer is switched off using the power button (or at the mains) or through Windows commands, it ceases to function and can only be switched on again manually. Our systems automatically update Windows and their anti-virus software overnight, so they must be left on even if no one is apparently using them. Except for cases of fire or electrical risk, our systems **must not be shut down**.

A note on filenames

When you create new files or rename existing ones, Windows will allow you to choose any name as long as it does not contain prohibited characters (\ / : * ? | < >) and its length including its path (the list of folders/drives you have to go through to reach it) does not exceed 255 characters. Also, Windows is case preserving (if you name a file "LaTeX", it will not reduce all the letters to lower or upper case), but **not** case sensitive ("Mail" and "mail" are exactly the same file). If you use non-Windows means to create files that violate these rules you will find yourself with files you cannot access or delete and failures to log out properly due to too long filenames.

At the end of the year you will be given the choice of having your files copied to a CD-ROM you can take home with you. Since the most common formats for CD-ROMs (ISO9660 and ISO9660/Joliet) are more stringent in the length of filenames (32 and 64 characters respectively) and number of folders in the path (6), it would be useful if you restricted your filenames to these limits.

Last words

If at any moment the system displays a red circle with a white cross at the right end of the taskbar (besides the clock), or a warning about going offline, contact us immediately without logging out or changing anything; you have gone above your profile quota and we need to clear some files from it.

The software installed in our machines is centrally managed, that means that if you want any extra application installed you have to contact us. **You are not allowed to install or download software** onto any of our systems, and doing so constitutes a violation of the Department's rules of conduct (see http://www.stats.ox.ac.uk/about_us/it_information/restrictedaccess/?a=2150)

Most of the usual problems and questions will be answered in our documentation web pages, **http://www.stats.ox.ac.uk/about_us/it_information**; should you require further assistance, you can also contact F. David del Campo Hill, Saffron Greenwood, Susan Hutchinson or Ashley Woltering by e-mailing **`ithelp@stats.ox.ac.uk`**.

F. David del Campo Hill
Computing Officer
Department of Statistics
University of Oxford
6th October 2008

Appendix: Notes for the initiated

These extra notes are for those that know (or want to know) a bit more about the workings of Microsoft Windows XP Professional; it is not necessary to understand them to be able to use the machines in the Department of Statistics.

User profiles

The settings for user of Windows XP are stored in a set of multiple files called the **profile**. This profile has information about the user, like desktop icons or size and shape of the Internet Explorer window when opened. All users in the Department have what are called **roaming profiles**; this means that the files for each user's profile are stored in a central server.

When a user logs in to one of our machines for the first time, the machine will query the central server for a profile. If no profile exists, a default empty profile is created and stored in the local machine's hard drive in a folder called C:\Documents and Settings*username*. All changes users make to their profiles are stored in that local copy until they log out. When users log out of the machine, a copy of their profile (with all the changes they made to it) is transferred to the central server and stored there, available for the next time the user logs into any of our machines. Part of the information the profile contains is the last time a user logged in or made a change to their profile.

If the server had a profile to offer, it will be downloaded and copied to the local machine's hard drive in the C:\Documents and Settings*username* location and used until the user logs out; when the local machine will send a copy of the profile (and all the changes made during the session) back to the central server (it will also keep the local copy).

When users log into a machine they have logged in before, the machine will check with the server if the local copy of the profile is the most up-to-date (that is, the date stamp on the central server profile is the same as the date stamp on the local machine profile); if it is, the machine will not download the profile again, but use the local copy it has (that is why logging in to a machine you have last logged out is faster than logging in to a machine you have never logged in before). If the central server profile is newer than the local profile, the machine will delete the local profile and download the central server one to replace it.

It is important to note that not all the user's settings are stored in the profile; the desktop and the server settings for your Outlook Express e-mail are part of your profile, but the folders inside your Outlook Express accounts are not. That is why you have to refresh your e-mail IMAP folders when you log in to a new machine.

Your desktop (and all its contents) is part of your profile; it is up/downloaded through the network when you log out/in. This will seriously slow things down if you have files or folders on it. That is why we ask people **not to save files or folders on their desktops**; you can put as many shortcuts as you want in it (they are all less than 4 KB in size), just do not put the actual files or folders there (be careful, some badly-behaved programs have the desktop as their default location for saving things).

If our central profile server were to fail, no network profiles would be available for local machines to use; in this case, if the machine has a local profile, it will use that one (after giving you a warning about the fact); if not, it will create a default empty profile that will be discarded when you log out (loosing all changes made to it).

This local profile feature can give rise to a serious problem when compounded with the way Windows XP boots up. When Windows XP starts up, it initializes several programs called services that allow it to access the network and users to log in. But to make Windows XP boot up as fast a possible, these services are initiated asynchronously, that is, each of them starts at its own speed without checking with the others. That way, it is possible for Windows XP to offer the users the log in screen, before it is even capable of accessing the network. If a user were to try to log in immediately after the machine is booted up, it is possible that the machine would accept the username and password, but not being able to access the network (and hence the server) for a profile, it will use a local copy of the user's profile if it has one. If it has no local copy of the user's profile, it will create a default empty one. The problem originates when the user logs out; since there was no actual error in the network, it will behave as if its present copy of the profile (which could be very old or empty) is the right one, and will proceed to **copy it over the central server one** it can now access. That way the right/latest copy of the profile would be overwritten by an older or empty one. So, if when you log in, you see a warning message about not being able to see the network profile and/or using a local copy instead, call us and **do not log out** or you will overwrite your good profile in the central server.