

Math Department Computing Notes

August 10, 2010

Computer Accounts

- SMU email and web accounts are distributed and maintained by ITS
- Accounts on the Math department Linux and Unix machines are maintained by the Math department. Questions regarding these accounts should be sent by email to Prof. Reynolds.

MS Windows PCs

- Users should log in with their SMU USERID and PASSWORD
- Users are responsible for their own file backup. It has happened that a hard disk has failed and users have lost significant work. Also, the computers can disappear at any time for software upgrade or repairs. Save and backup your work. I recommend using `http://locker.smu.edu` to store files securely.
- Printing should automatically go to the Math department printer in room 208. Please don't abuse the printer – think before you print.
- Please keep the Windows desktops clean of extraneous files and programs. DO NOT download programs from the web.
- Matlab and Maple are installed locally on the PC.

Linux Machines

- The Linux machines have very complete, powerful and easy to use GUIs: gnome and KDE (use whichever you like). If you are familiar with Windows or OS X, you should have little trouble running programs, surfing the web, or manipulating files. There are also a large number of easy to use programs such as word processors, spreadsheets and web browsers (OpenOffice and Firefox).
- Matlab is locally installed (type `matlab` at the terminal prompt); Maple is not (use `coe.math.smu.edu` instead – see below)
- `gnat`, `gnora`, and `calypso` are designated “homework” machines. They are located on desks in 217 where users can log in directly, or they can be reached using `ssh` from the linux or windows computers.
- These can also be used to compile Fortran, C and C++ programs for homework/research.

COE

- The department server hosts all user home directories, can be used to compile Fortran, C and C++ programs, and has both Maple and Matlab installed.
- To run maple programs, type `xmaple` at the command prompt.
- To log in, you must use `ssh` from any linux or windows computer.

File Systems

- Each Windows PC maintains its own separate file system; i.e. a file on one PC will not be accessible on another unless you physically move it there. You are responsible for your own file backups on the Windows PCs.
- The Linux computers share a common file system, i.e. if you save a file on one computer it will instantly be available on all other linux machines (including coe, that hosts the files). This system is automatically backed up each week.

A bit about Linux

- Do not be scared of Linux. It is similar to DOS, only much more powerful (in fact DOS originally derived from early versions of UNIX). The basic file manipulation commands are easy to use and remember:
 - `ls` = list files and directories located inside the current directory
 - `mv` = move files/directories from place to place, or rename files/directories
 - `rm` = remove file
 - `rmdir` = remove directory
 - `cp` = copy files
 - `cd` = change directory
- To print from the command line, use the `lpr` command:
`lpr -Pprinter_name file_name`
where `printer_name` should be either `lj2` or `ljoneside`. These correspond to the two-sided and one-sided printer drivers, respectively, for the main Math department printer in room 208. For example,
`lpr -Plj2 postscriptfile.ps`
sends the postscript file called `postscriptfile.ps` to the printer `lj2` in room 208. The `lj2` printer should already be set as your default. I would recommend that new users do not print from the command line. You should instead print using the menus from inside programs (e.g. `acroread` for pdf files, `firefox` for web pages, `emacs` for text files, etc.), so that it will automatically translate the document to postscript (the language of printers). If you wish to print from the command line, you should convert your files to postscript first (e.g. use `pdf2ps` to convert pdf to postscript, or use `enscript` to convert ASCII text to postscript, and then print).

Passwords on Linux and Unix

- After you have been given your original password you must change it to something secure. It should contain some mix of capital letters, numbers, and special characters. You are responsible for the security of your account and the machines. Do not give out your password.
- To change your password on the linux machines, type the command `passwd`. It will first prompt you for your old password before asking you for a new one, which you must enter twice.
- A separate password database is maintained on each linux machine. Thus, when you change your password on one machine, it must be manually copied to all other machines. Either you can log in and change your password on

every machine, or you can do it on one and notify Prof. Reynolds, who can copy it automatically (to do this, send the name of the computer where you changed the password to reynolds@smu.edu).

Questions

- Please use your fellow students as sources of “how to” information. Also, please let the others know if you discover a useful shortcut or property.
- Non-critical computing questions should be submitted by email to Prof. Reynolds.
- Suggestions, comments or improvements to this document are very welcome.