**PX390 ESSENTIAL BACKGROUND.**

**Communicating with nenneke**

There are lots of ways of doing this. The basic objective is to be able to log into nenneke and gain access to your file store and the gcc compiler. To start with you need a wired or wireless internet connection.

You will also need an account on the nenneke server, which is part of the SCRTP. Almost all interaction with the SCRTP is handled electronically. Information is located at:

https://www.warwick.ac.uk/scrtp

Your first step is to navigate to “Desktop Computing” then “Getting Started” and apply for an account on the Linux desktop system. Creation of your account is confirmed by email to you. You should read that email, and click on the link within it, so as to subscribe to the scrtp-linux-user mailing list, which is the primary means of alerting users to important developments (such as system downtime, network incidents, changes to the available software etc). You must also read the Acceptable Use Policy (AUP).

Try to log in as soon as possible in case there are unforeseen problems.

* 1. ***From Windows Terminal emulator***

Windows 10 have its own terminal application, which you can find by typing *cmd* or *terminal* in the search field of the task bar. To navigate the directory structure on your local computer you will have to use old style DOS commands. For example, you type *dir* to list a content of a directory (a floder) you are in and *cd* to change the directory. Windows 10 also comes with a PowerShell (type PowerShell into the search field of the task bar) application, a cross-platform command-line shell and scripting language. The advantage of using PowerShell is that recognizes Linux/UNIX commands. This makes the working on both local and remote machine nearly identical. **I recommend that you use PowerShell for the command line tasks.**

Note that, Windows 10 operating system does not have a gcc compiler included and you will have to download and install it if you would like to compile C programs on your own computer. You may start with the web pages <https://sourceforge.net/projects/mingw-w64/> to get familiar with the product. Download the MinGW Installer app and choose the basic installation.

In order to connect to a remote host, at the prompt type

**ssh phwxyz@nenneke.space.warwick.ac.uk**



where phwxyz should be replaced with your user code (ssh gets you a secure connection) and you are off.

You may then see a prompt:

**TERM = (unknown)**

And you should type

**xterm**

If you prefer to use a app with the graphical user interface PuTTY is a program for Windows which allows you to communicate with other computers at command line level. PuTTY is a terminal emulator (amongst other functions) – that is it opens a (console) window which behaves like an old fashioned computer terminal.

On a university PC PuTTY can be found on Software Centre app.

On your own PC you can download PuTTY from:

http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html

To make first contact type

**nenneke.space.warwick.ac.uk**

as the Host Name and click on Open.

After a short pause, nenneke will ask you to log in which you do with your user (phwxyz) code and password.

\*\* **Note: if you have not asked SCRTP to generate a new account for you, this step will not work. Please, read the first section of this document to learn how to apply for the relevant account.**

***1.2 From a Mac***

If you use a Mac, things are very easy indeed. The Mac is (underneath the big Cat OS) a UNIX machine and already has a built in terminal. You can find this at Go, Utilities then double click Terminal.app. You will be able to communicate directly with the UNIX layer in your machine (which probably already has gcc installed). At the prompt type

**ssh phwxyz@ nenneke.space.warwick.ac.uk**



where phwxyz should be replaced with your user code (ssh gets you a secure connection) and you are off.

You may then see a prompt:

**TERM = (unknown)**

And you should type

**xterm**

Although you can probably write and test your code on your Mac without installing anything, beware that modern Macs (being Intel based) are littlendian machines (just like Windows PCs) so that the memory structure is different from nenneke which is bigendian. You must therefore finally develop and test your code on nenneke.

***1.3 Transferring files to your file store on nenneke***

Again, there are many ways to do this. The scp and rsync commands works fine if you like raw UNIX commands. Otherwise there are various more graphical alternatives.

A good method is to use from your own PC is FileZilla (Google for the latest version) It is secure, easy to use, drag and drop, and tells you what it is doing. Filezilla is available on university managed systems via software centre app. There is Filezilla version for the Mac as well.

See also:

*http://www2.warwick.ac.uk/services/its/servicessupport/computers/linuxworkstationguide/faqsandtips/accessfilesfromoffcampus/*

**2. Writing your code**

What you use to do this is up to you. Modern IDEs like those with Microsoft C++ Express Edition, or XCode for the Mac (both free downloads) make laying out your code neatly (e.g. with indents etc.) very easy but might also be overkill. You need to write C files too, not C++ object oriented code, the Windows IDE needs to be used in file mode, not project mode. A plain text editor will also do.

Last updated: August 2020