**Systems Programming**

**Accessing CS Unix Servers using PuTTY**

## 0. Introduction

This sheet outlines

* How to access a School SSH server from outside the School network, from both Unix and Windows (using the PuTTY Secure Shell (ssh) connection tool).
* How to access the School stlinux servers from a School SSH server

## 1. Using SSH to Access a School SSH Server

Secure Shell (ssh) is a cryptographic network protocol for operating network services securely over an unsecured network.

To connect to a remote machine you need to know its host name. For security reasons only a few School servers are open to ssh connections. Its recommended that you use ssh1.dcs.gla.ac.uk

How you use ssh is determined by your operating system.

#### 1.1 Unix Platforms: MacOS, Ubuntu, Debian etc.

1. From the command line invoke ssh:

% ssh ssh1.dcs.gla.ac.uk

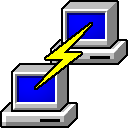
2. log in to Unix as usual.

3. You are now logged into a School SSH server

#### 1.2 Windows

1. We recommend using the popular PuTTY terminal emulator. If you are using a School/University CSCE Windows machine its already installed. If you don’t have a copy simply do an internet search for “putty download” and install the appropriate binary (e.g. 32 or 64 bit)

2. You may need to search for the PuTTY utility, e.g. on a CSCE machine. Then click on PuTTY to launch it:



3. Type the full host name of the Unix machine in the “Host Name (or IP address)” window:

Graphical user interface

Description automatically generated

4. Hit the “Open” button

5. You may be prompted with a security question. Recommend you answer “Yes”.

6. When the terminal emulator window appears, log in to Unix as usual.

7. You are now logged into a School SSH server

## 2. Connecting to the Stlinux Servers from an SSH Server

The School has a number of Unix servers available to you, and some are imaginatively named stlinux02, stlinux03 … stlinix08

2. From the Unix command line use a secure socket tool (like ssh) to connect to a Unix server, e.g.

% ssh stlinux03

3. Complete your Unix login

## 3. Copying Files to the School File System: SCP

The School Unix machines share a file system. We recommend using a Secure Copy utility.

The syntax is that scp <filename> <user>@<hostname>:<dir> will place the file <filename> in directory <dir> belonging to <user> on host <hostname>.

How you use secure copy is determined by your operating system.

#### 3.1 SCP on Unix Platforms: MacOS, Ubuntu, Debian etc.

1. From the Unix command line invoke scp. So scp <filename> <user>@<hostname>:<dir> will place the file <filename> in directory <dir> on host <hostname>.

For example:

stlinux04(14 ^H)scrap% scp semantics-v3.tex [trinder@sibu.dcs.gla.ac.uk:scrap](mailto:trinder@sibu.dcs.gla.ac.uk:scrap)

Enter passphrase for key '/users/staff/trinder/.ssh/id\_rsa':

semantics-v3.tex 100% 9499 3.1MB/s 00:00

stlinux04(15 ^H)scrap%

#### 3.2 PSCP on Windows

1. PuTTY comes with a pscp.exe utility

2. From the Windows command line invoke pscp:

C:\Users\Phil\Boring\Erlang>pscp stardust.erl trinder@ssh1.dcs.gla.ac.uk:scrap

trinder@ssh1.dcs.gla.ac.uk's password:

stardust.erl | 1 kB | 1.2 kB/s | ETA: 00:00:00 | 100%

C:\Users\Phil\Boring\Erlang>