

COMS W4187 Security Architecture and Engineering

Fall 2009

VMware How To

1 Things you need to know before getting started

- Your VMware assignment;
an email has been sent to you with an assignment that looks like
`hostname.cs.columbia.edu`
For example, `sec-vm01.cs.columbia.edu` means that you have been assigned that VM.
- There is a user account named `sampleuser` with login password `N0hack1NG53f` on your VM; `sudo -s` and the same password grants root privileges. Please change your login passwords immediately, if you do not want your homework tampered.

2 Working with VMware machines

You can work at your assigned machine remotely, whether you are on the university network or not, using SSH.

2.1 For Linux/Mac Users

Remote login from your own Linux/Mac machine is quite similar as using any machines in the CLIC lab. Make sure you have SSH installed for your Linux system. Open a terminal and run SSH to log into the VMware machine assigned to you.

```
vpk@athens /home/vpk $ ssh sampleuser@sec-vm01.cs.columbia.edu
```

2.2 For Windows Users

One of the free available SSH clients for Windows users is PuTTY, which can be downloaded from here: <http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html>.

Run the PuTTY client and enter the hostname of your machine in the “Host Name” field. You can also save your session, so as not to type everything each time you connect (see Figure 1). Next, supply the username and your password and a shell should popup.

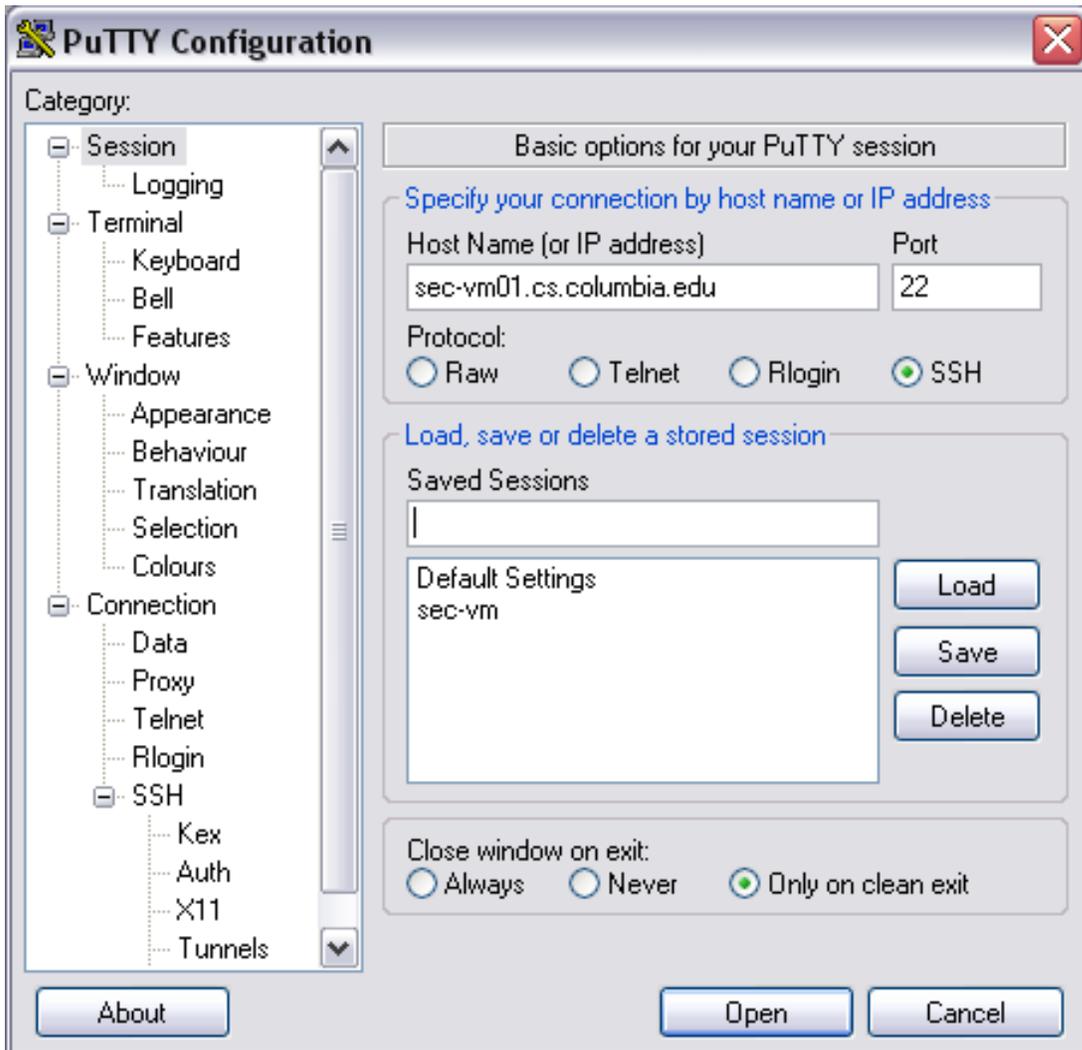
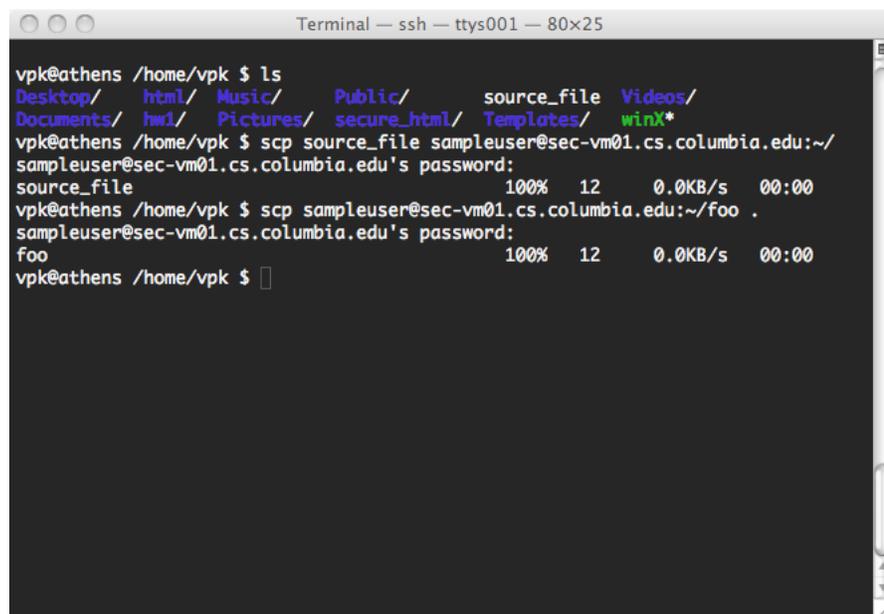


Figure 1: PuTTY Session Setup

3 A Few Hints

1. Your VM comes with the essential build utilities that you might need (*e.g.*, `gcc`, `make`) installed. If for some reason you want to install additional software you can use `apt-get` or `aptitude` to add packages from the Ubuntu repository. In case you are not familiar with a Debian-based Linux distribution, you can find more information about the APT package manager in the following links:
<http://www.debian.org/doc/manuals/apt-howto/>,
<https://help.ubuntu.com/9.04/serverguide/C/apt-get.html>
2. You can write your code directly on your supplied machine, or on a CLIC host machine, and upload files onto your VM using the `scp` command (or `pscp` if you are a Windows user — you can find this utility in along with PuTTY).



```
Terminal — ssh — ttys001 — 80x25
vpk@athens /home/vpk $ ls
Desktop/  html/  Music/  Public/  source_file  Videos/
Documents/ hw1/  Pictures/ secure_html/ Templates/  winX*
vpk@athens /home/vpk $ scp source_file sampleuser@sec-vm01.cs.columbia.edu:~/
sampleuser@sec-vm01.cs.columbia.edu's password:
source_file                               100% 12    0.0KB/s  00:00
vpk@athens /home/vpk $ scp sampleuser@sec-vm01.cs.columbia.edu:~/foo .
sampleuser@sec-vm01.cs.columbia.edu's password:
foo                                       100% 12    0.0KB/s  00:00
vpk@athens /home/vpk $
```

Figure 2: Two examples of `scp` command: (1)push the file `source_file` from host machine to your VM; (2)pull the file `foo` from your VM to host machine

3. Once you are done with your homework, please kill all process initiated by you.
4. In your homework submission, you need to include the passwords of your VM user accounts (including `root`) for the TAs to grade your homework.
5. Test your VM as soon as possible and don't wait until the last minute. Contact your TA for any problems regarding the VM before dropping trouble tickets to CRF (please don't send email to CRF staff directly).
6. **Important** notice: Your VMs are not backed-up automatically. Therefore, make sure that you save frequent snapshots of your code wherever you prefer (*e.g.*, code repository, manually created `.tar.gz` file). In case you mess-up the VM there is always the possibility of reverting it into its initial state (email the TAs).