

Lab 01

Connecting Putty to Azure

Deep Azure

Download Putty

- Go to <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>
- Click 64 bit installer and install Putty with default options

Package files

You probably want one of these. They include all the PuTTY utilities.

(Not sure whether you want the 32-bit or the 64-bit version? Read the [FAQ entry](#).)

MSI ('Windows Installer')

32-bit: [putty-0.70-installer.msi](#) [\(or by FTP\)](#)
[\(signature\)](#)

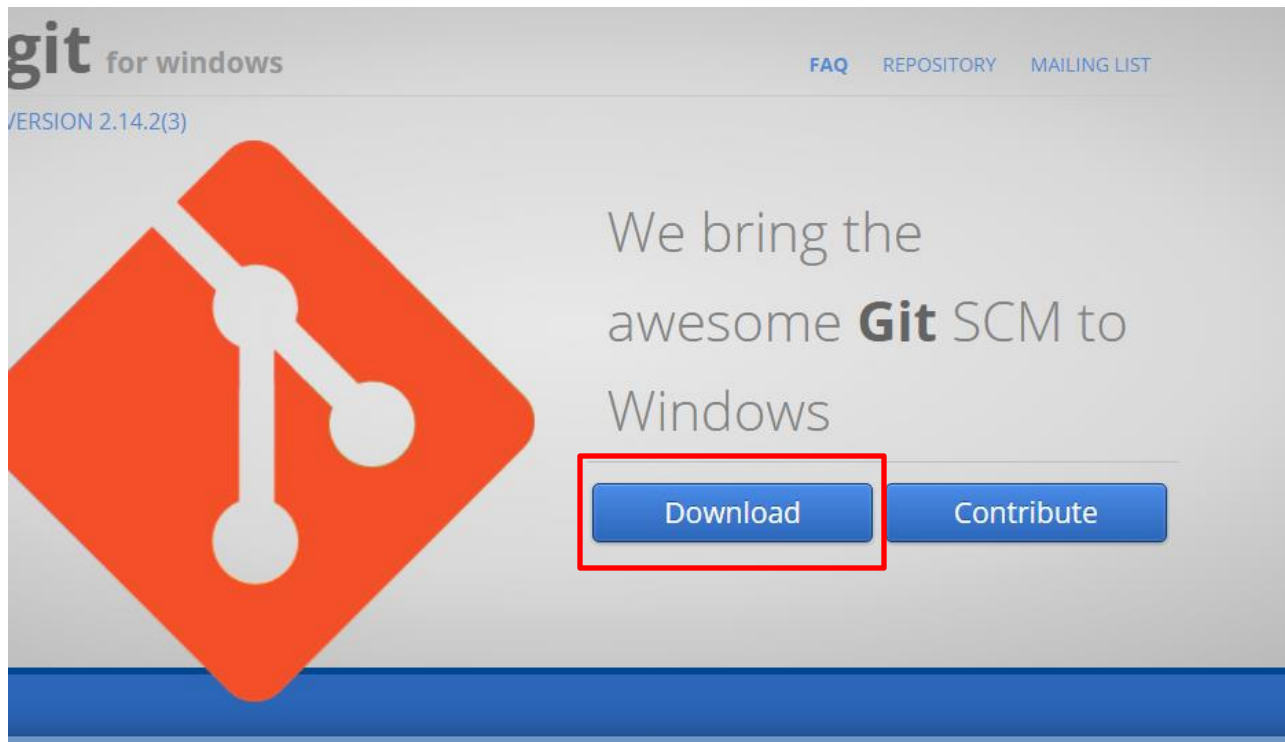
64-bit: [putty-64bit-0.70-installer.msi](#) [\(or by FTP\)](#)
[\(signature\)](#)

Unix source archive

.tar.gz: [putty-0.70.tar.gz](#) [\(or by FTP\)](#)
[\(signature\)](#)

Install Git for Windows

- Go to <https://git-for-windows.github.io/>
- Click Download and use all default settings



Create a Private Key

- In a Git Bash window type in the following
openssl.exe req -x509 -nodes -days 365 -newkey rsa:2048 -keyout \myPrivateKey.key -out myCert.pem

C:\ MINGW64:/c/Users/user

```
user@steve MINGW64 ~ (master)
$ openssl.exe req -x509 -nodes -days 365 -newkey rsa:2048 -keyout myPrivateKey.
key -out myCert.pem
Generating a 2048 bit RSA private key
.....+++
.....+++
writing new private key to 'myPrivateKey.key'
-----
You are about to be asked to enter information that will be incorporated
into your certificate request.
What you are about to enter is what is called a Distinguished Name or a DN.
There are quite a few fields but you can leave some blank
For some fields there will be a default value,
If you enter '.', the field will be left blank.
-----
Country Name (2 letter code) [AU]:
```

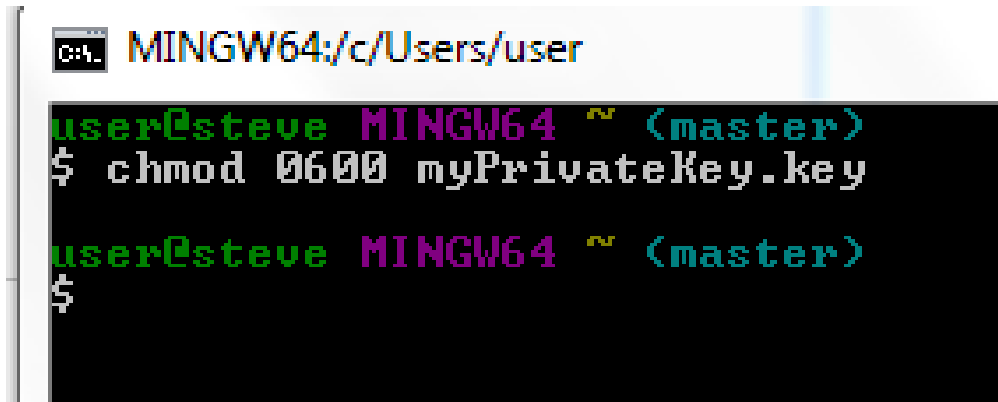
Create a Private Key

- Enter in the Requested Information

```
=====  
Country Name (2 letter code) [AU]:us  
State or Province Name (full name) [Some-State]:Texas  
Locality Name (eg, city) []:Houston  
Organization Name (eg, company) [Internet Widgits Pty Ltd]:GoAstros  
Organizational Unit Name (eg, section) []:Altuve  
Common Name (e.g. server FQDN or YOUR name) []:2B  
Email Address []:[REDACTED]@gmail.com
```

Set Security Permissions

- Type `chmod 0600 myPrivateKey.key` so that only you can access it

A screenshot of a Windows command prompt window. The title bar at the top reads 'MINGW64:/c/Users/user'. The prompt shows a user named 'user@steve' in a 'MINGW64' environment. The user enters the command '\$ chmod 0600 myPrivateKey.key'. The prompt then shows the user has entered another line, '\$', which is currently blank.

```
C:\Users\user> MINGW64:/c/Users/user
user@steve MINGW64 ~ <master>
$ chmod 0600 myPrivateKey.key
user@steve MINGW64 ~ <master>
$
```

Generate a public key

- Type in the following to generate a public key

C:\MINGW64\c/Users/user

```
user@steve MINGW64 ~ <master>
```

```
$ openssl.exe rsa -pubout -in myPrivateKey.key -out myPublicKey.key  
writing RSA key
```

```
user@steve MINGW64 ~ <master>
```

```
$
```

Create a private key for Putty

- In Git bash type the following to convert your private key into an RSA private key that PuTTYgen can understand

```
user@steve MINGW64 ~ (master)
$ openssl rsa -in ./myPrivateKey.key -out myPrivateKey_rsa
writing RSA key
```


Set permissions

- Type in the following to set the permissions on your private key so that only you can access it

```
user@steve MINGW64 ~ (master)  
$ chmod 0600 myPrivateKey_rsa
```

Download PuttyGen

- Go to <https://www.chiark.greenend.org.uk/~sgtatham/putty/latest.html>
- Go to the “Alternative Binary Files” section
- Click on the puttygen.exe link

puttygen.exe (a RSA and DSA key generation utility)

32-bit: [puttygen.exe](#) (or by FTP) (signature)

64-bit: [puttygen.exe](#) (or by FTP) (signature)

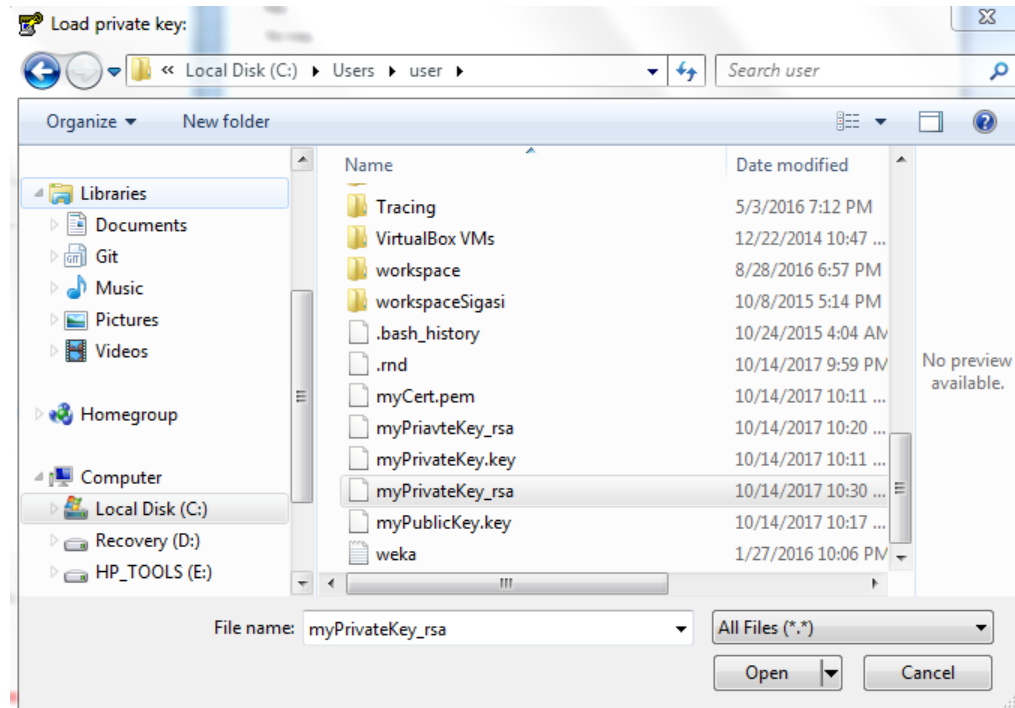
putty.zip (a .ZIP archive of all the above)

32-bit: [putty.zip](#) (or by FTP) (signature)

64-bit: [putty.zip](#) (or by FTP) (signature)

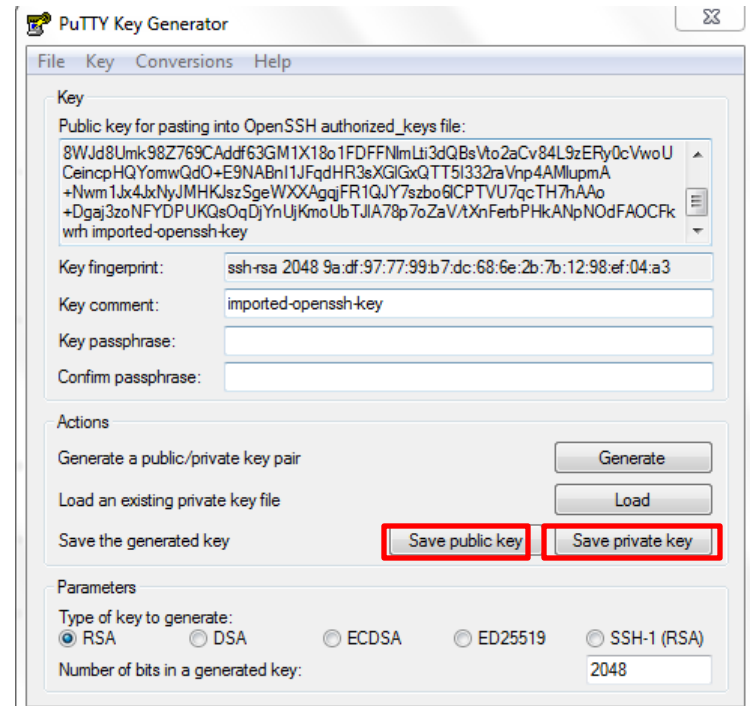
PuttyGen

- In PuttyGen select File > Load Private Key
- When the window to select a file pops up select “all files” from the dropdown menu to display files of all types
- Navigate to the directory you were in within Git bash
 - Use pwd to figure out what directory you are in
- Select the “myPrivateKey_rsa and hit open



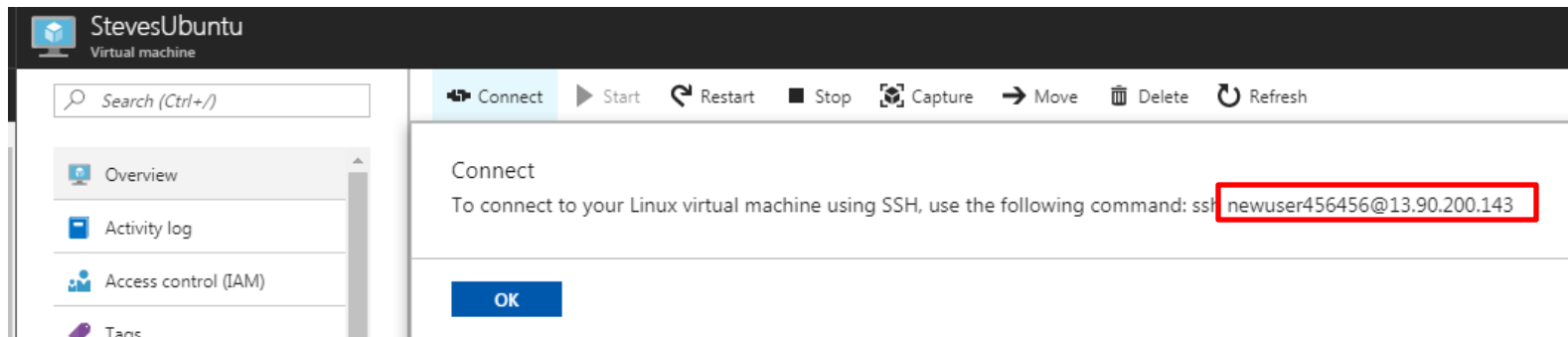
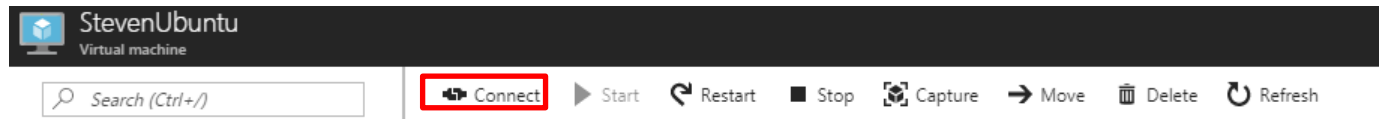
Save your keys

- In the bottom right of the window save your public key in a convenient location
- In the bottom right of the window save your private key in a convenient location
- You can assign a password if you wish to be more secure



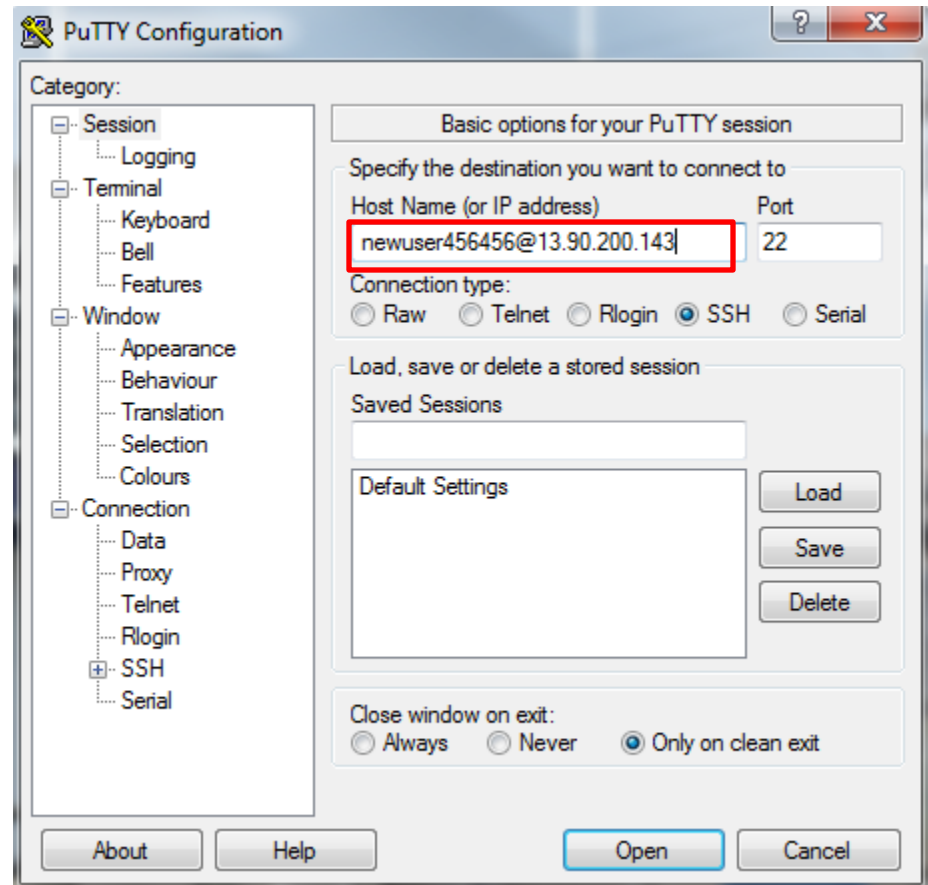
Connect to VM with Putty

- Create and launch an Azure VM and hit the connect button to obtain the ssh name for your vm



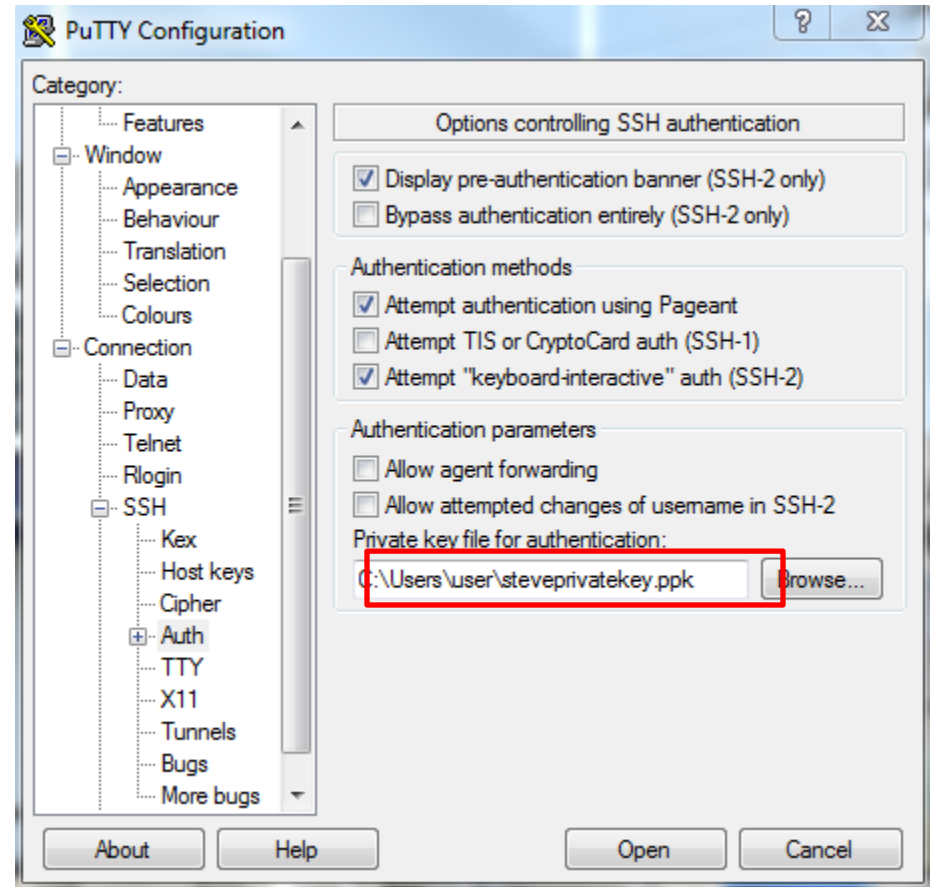
Connect to your VM with Putty

- Add the ssh name from the previous slide to the red box
- Don't hit open yet!



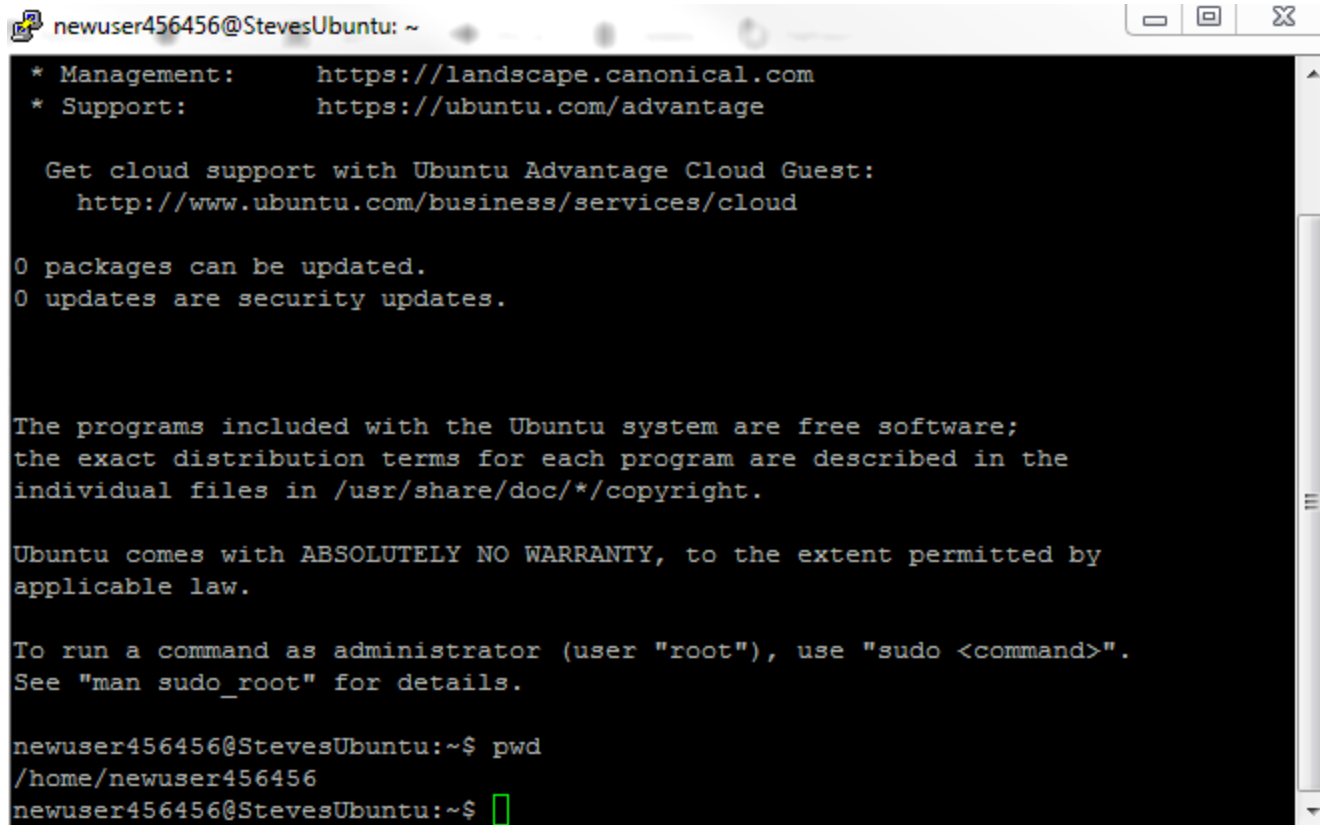
Connect to your VM with Putty

- Go to connection > SSH > Auth and browse for your private key
- Hit open and connect to your Azure VM!



Access your VM

- Your VM should look something like this...
- This shows the home directory in Ubuntu after a successful Putty connection.



```
newuser456456@StevesUbuntu: ~  
* Management:      https://landscape.canonical.com  
* Support:         https://ubuntu.com/advantage  
  
Get cloud support with Ubuntu Advantage Cloud Guest:  
http://www.ubuntu.com/business/services/cloud  
  
0 packages can be updated.  
0 updates are security updates.  
  
The programs included with the Ubuntu system are free software;  
the exact distribution terms for each program are described in the  
individual files in /usr/share/doc/*/copyright.  
  
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by  
applicable law.  
  
To run a command as administrator (user "root"), use "sudo <command>".  
See "man sudo_root" for details.  
  
newuser456456@StevesUbuntu:~$ pwd  
/home/newuser456456  
newuser456456@StevesUbuntu:~$
```