**SSH**

Overview

Secure shell is a protocol for connecting from one computer to another. SSH runs on port 22 by default unless changed. Know ssh hosts are located in *.ssh/known\_hosts* file.

You can connect through ssh 2 ways, keys or user/password. Connecting via keys is more secure. To generate an ssh key for the first time on your computer use:

*ssh-keygen -t rsa*

This will give you 2 keys, a public and a private key. To view your keys cd in to ~/.ssh and you will see 2 files: id\_rsa (private key) & id\_rsa.pub (public key). The public key is what you share with a remote computer. To send these credentials to a remote server, use:

*Ssh-copy-id user@host*

When doing this on digital ocean, you will need to change the /etc/ssh/sshd\_config file so *PasswordAuthentication* is set to *yes*.

SFTP

SSH File Transfer Protocol (SFTP) allows you to transfer files between remote and local machines. SFTP when compared to FTP is more secure as connections are encrypted, and only run on one port. As opposed to FTP which can run on multiple ports and is not encrypted.

*Sftp user@host*

When in sftp ‘mode’, type ‘?’ to view a list of commands. Generally if you want to run commands to see local machine output, use ‘l’ as a prefix, e.g. ls becomes lls, pwd becomes lpwd and so on…

SCP

Secure Copy (SCP) allows you to send/receive files from/to a server.

*Scp filename user@host: // where colon is home directory*

*Scp filename user@host:/var/tmp*

*Scp user@host:/var/tmp . // to send files from remote to local*

Creating an SSH tunnel

Forward ports from a local machine to a remote machine.

For example, say on my local machine I want a MySQL GUI to view my servers mysql database/s, I can setup a tunnel to make it possible.

*Ssh -L 9000:localhost:3306 user@host*

9000 – local port to use in order to connect ssh

Localhost – the remote servers local host

3306 – this is the default mysql port

In the MySQL GUI you can then create a new db connection in which you would put for the credentials:

Hostname: 127.0.0.1 (local machine localhost)

Port: 9000 (local machine port to use which is forwarded to remote server)

User: username (mysql username on remote server)

Password: password (mysql password for the above user on remote server)

Database: database name (on remote server)