Connecting to a Virtual Machine

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Virtual Machine

- From a Network prospective, a VM is the same as any other physical device on the LAN.
- Sometimes no access to physical Host
  - Cannot interact with it physically
  - No keyboard/mouse/screen
- Need Remote access Technology...

Remote Connection Technologies

- Remote Desktop
  - RDP (Remote Desktop Connection)
  - Virtual Network Computing (VNC)
- Terminal Emulation
  - Telnet
  - Secure Shell(SSH)

Server (:port): 127.0.0.1:5901

User name:

Password: ••••••

Add Delete   Connect

This is your password
on telnet and FTP:
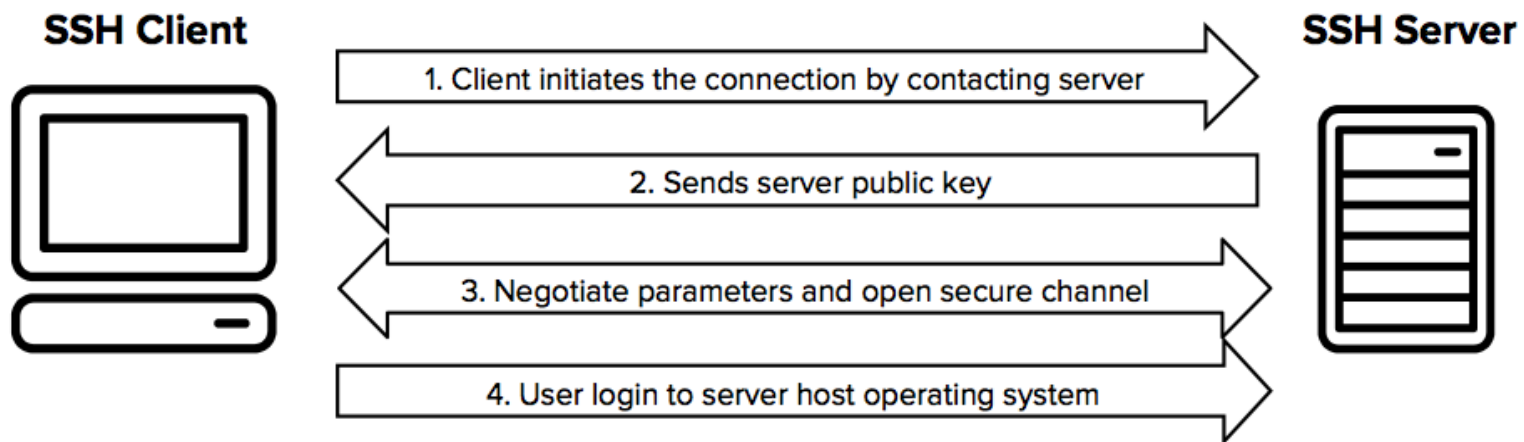
vu1n3rab13

Secure Shell(SSH)

- "SSH is a protocol for secure remote login and other secure network services over an insecure network." – RFC 4251

- Can create a secure channel between two connected devices
  - On your LAN, WAN, Cloud...

- Several implementations. OpenSSH included in most Operating Systems:

Name	Mac OS X	Mac OS classic	Windows	Cygwin	BSD	Linux	Solaris	Java	OpenVMS	z/OS	AmigaOS	AIX	HPUX	iOS: iPhone,[Note 1] iPod Touch	webOS	Android
OpenSSH	Included	No	Partial[Note 4]	Included	Included	Included[Note 5]	Yes	No	Yes	Yes	Yes	Yes[Note 6]	Included	Yes[Note 7]	Yes[Note 2]	Partial

https://en.wikipedia.org/wiki/Comparison_of_SSH_servers

Connecting to Remote VM using Secure Shell

- You need an SSH Client

- Machine you're connecting to needs to be running a SSH server, usually listening on port 22.
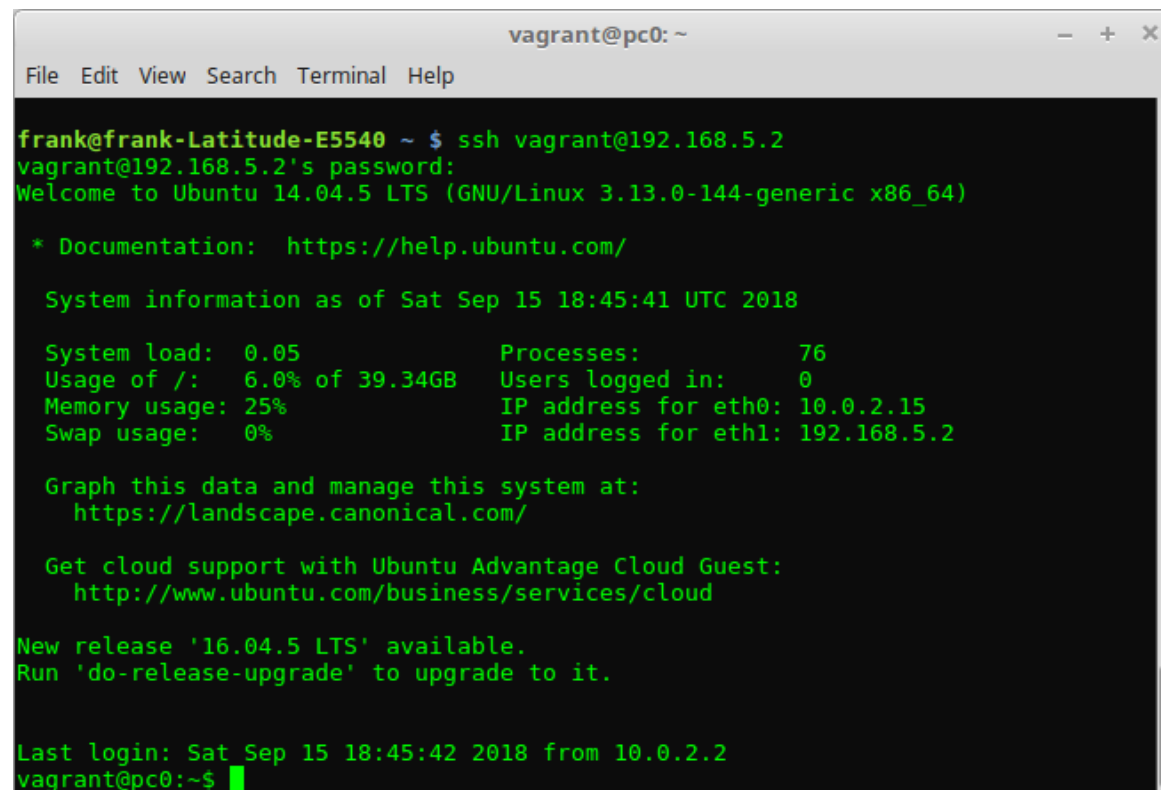
SSH Client ——————————————————————————— **SSH Server**

1. Client initiates the connection by contacting server →

← 2. Sends server public key

← 3. Negotiate parameters and open secure channel →

4. User login to server host operating system →

Connecting using Windows

- You'll need a SSH client
- Putty is great!
  - https://www.putty.org/

Connecting using OSx/Linux

- It's baked into the OS
- Can kick it off from command line
  - $ ssh vagrant@pc0
- Might get a warning relating to "authenticity of host"
- Can proceed if your sure of remote machine
- When you're finished type exit.