

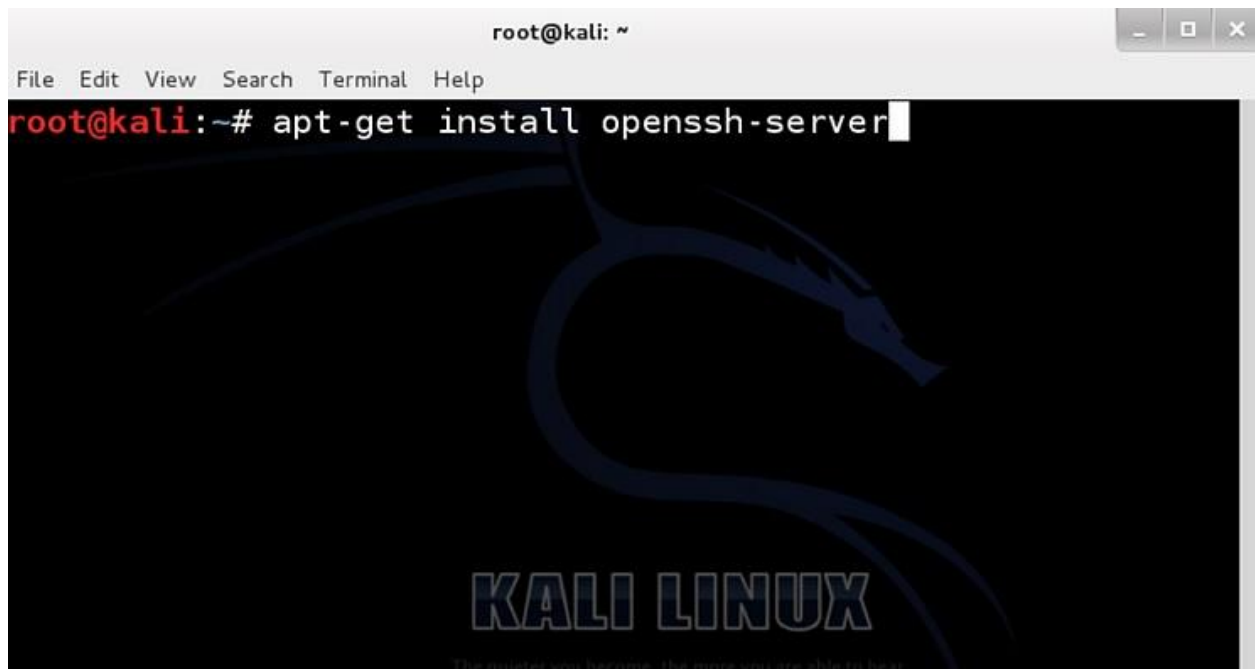
## 1. Create a user named bob in Kali.

```
root@kalix2 30: ~  
File Edit View Search Terminal Help  
root@kalix230:~# adduser --home /mikedan mikedan  
Adding user `mikedan' ...  
Adding new group `mikedan' (1002) ...  
Adding new user `mikedan' (1001) with group `mikedan' ...  
Creating home directory `/mikedan' ...  
Copying files from `/etc/skel' ...  
Enter new UNIX password:  
Retype new UNIX password:  
passwd: password updated successfully  
Changing the user information for mikedan  
Enter the new value, or press ENTER for the default  
  Full Name []: Mike Danseglio  
    Room Number []:  
    Work Phone []:  
    Home Phone []:  
      Other []:  
Is the information correct? [Y/n] y  
root@kalix230:~#
```

```
mikedan@kalix2 30: ~  
File Edit View Search Terminal Help  
mikedan@kalix230:~$ whoami  
mikedan  
mikedan@kalix230:~$
```

## 2. Enable ssh on Kali

### Install OpenSSH Server

A terminal window titled 'root@kali: ~' with a menu bar (File, Edit, View, Search, Terminal, Help). The command 'apt-get install openssh-server' is entered at the prompt 'root@kali:~#'. The background of the terminal is a Kali Linux wallpaper featuring a blue dragon and the text 'KALI LINUX' and 'The easier you become, the more you are. Not to be'.

2) Configure SSH to run on persistently.

In other words survive a reboot.

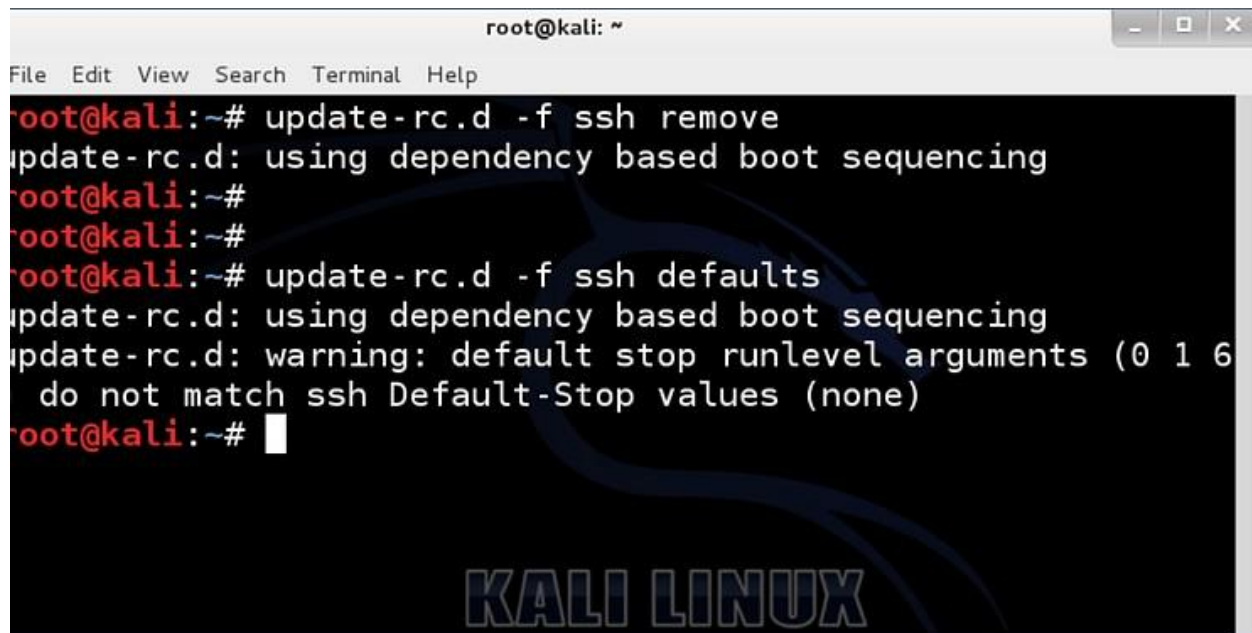
a) First we need to remove run levels for SSH by issuing the command:

```
root@kali~:# update-rc.d -f ssh remove
```

b) Now we need load the default SSH run level by issuing the following command:

```
root@kali~:# update-rc.d -f ssh defaults
```

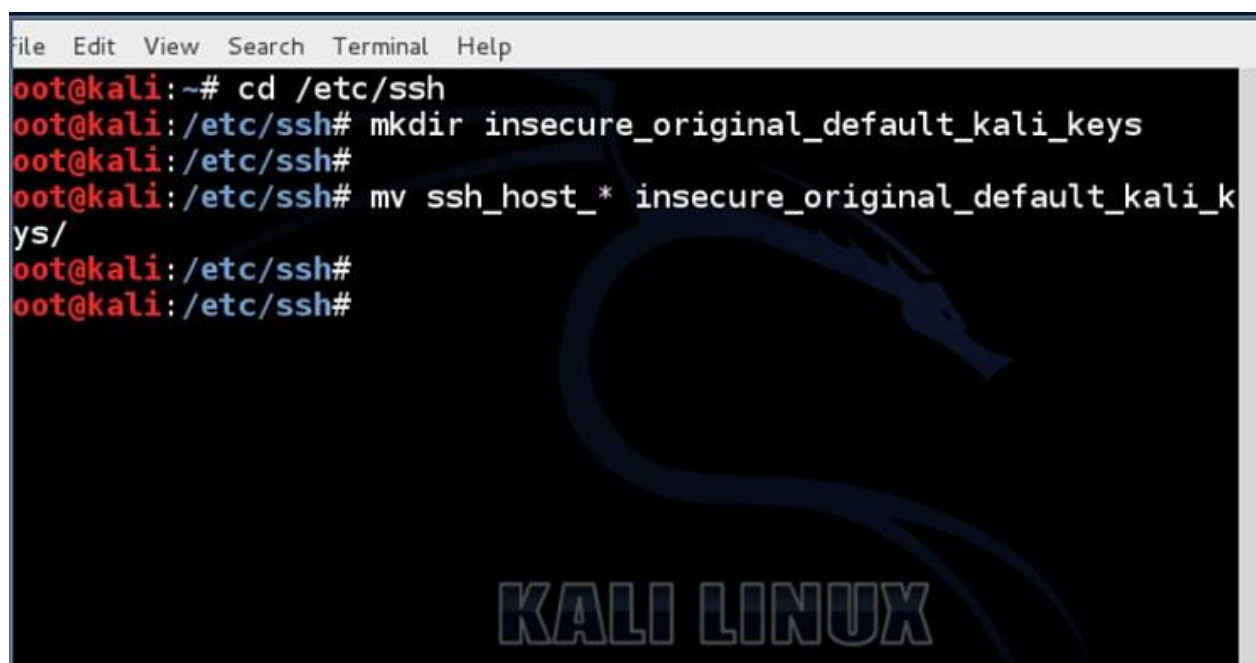
### 3) Change the default SSH keys



```
root@kali: ~  
File Edit View Search Terminal Help  
root@kali:~# update-rc.d -f ssh remove  
update-rc.d: using dependency based boot sequencing  
root@kali:~#  
root@kali:~#  
root@kali:~# update-rc.d -f ssh defaults  
update-rc.d: using dependency based boot sequencing  
update-rc.d: warning: default stop runlevel arguments (0 1 6  
do not match ssh Default-Stop values (none)  
root@kali:~#
```

#### a) Backup and move default Kali Linux Keys

```
root@kali:~# cd /etc/ssh/  
  
root@kali:/etc/ssh# mkdir insecure_original_default_kali_keys  
  
root@kali:/etc/ssh#  
  
root@kali:/etc/ssh# mv ssh_host_* insecure_original_default_kali_keys/  
  
root@kali:/etc/ssh#
```



```
File Edit View Search Terminal Help  
oot@kali:~# cd /etc/ssh  
oot@kali:/etc/ssh# mkdir insecure_original_default_kali_keys  
oot@kali:/etc/ssh#  
oot@kali:/etc/ssh# mv ssh_host_* insecure_original_default_kali_k  
ys/  
oot@kali:/etc/ssh#  
oot@kali:/etc/ssh#
```

## b) Create new keysType the following command in the terminal window:

```
dpkg-reconfigure openssh-server
```

```
root@kali:/etc/ssh# dpkg-reconfigure openssh-server
```

```
Creating SSH2 RSA key; this may take some time ...
```

```
Creating SSH2 DSA key; this may take some time ...
```

```
Creating SSH2 ECDSA key; this may take some time ...
```

```
[ ok ] Restarting OpenBSD Secure Shell server: sshd.
```

```
root@kali:/etc/ssh#
```

A screenshot of a terminal window titled 'root@kali: /etc/ssh'. The terminal shows the command 'dpkg-reconfigure openssh-server' being executed. The output includes messages for creating SSH2 RSA, DSA, and ECDSA keys, followed by a confirmation message '[ ok ] Restarting OpenBSD Secure Shell server: sshd.' and the prompt 'root@kali:/etc/ssh#'. The terminal has a menu bar with 'File', 'Edit', 'View', 'Search', 'Terminal', and 'Help'.

```
root@kali: /etc/ssh
File Edit View Search Terminal Help
root@kali:/etc/ssh# dpkg-reconfigure openssh-server
Creating SSH2 RSA key; this may take some time ...
Creating SSH2 DSA key; this may take some time ...
Creating SSH2 ECDSA key; this may take some time ...
[ ok ] Restarting OpenBSD Secure Shell server: sshd.
root@kali:/etc/ssh#
```

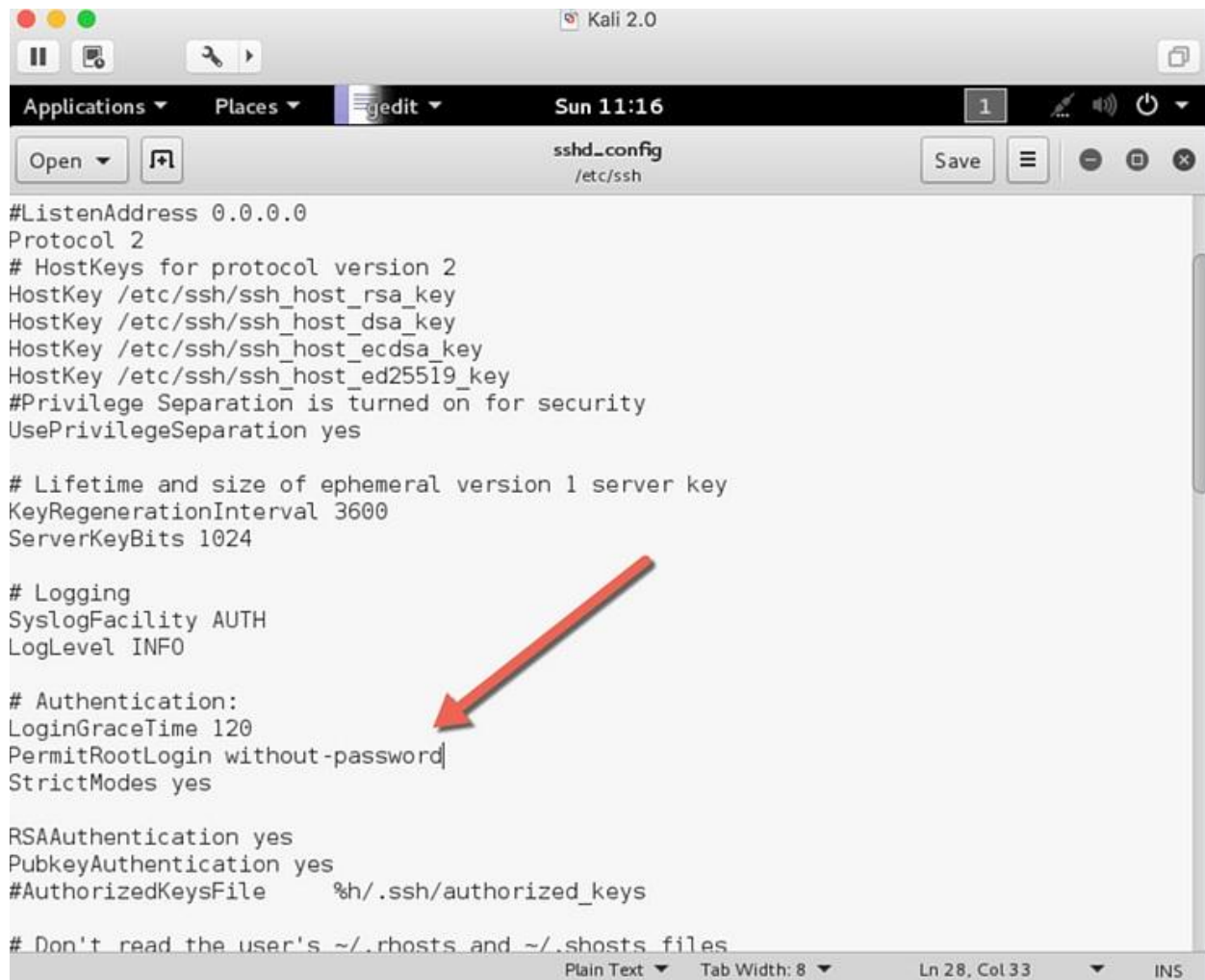
## 4) Root login via SSH on Kali

Kali ssh Permission denied, please try again.

By default in Kali 2.0 root login is disabled thru SSH. If you want to SSH in thru root (which has tons of security risks) you will need to do the following:

- edit `/etc/ssh/sshd_config`, change:

- change line `PermitRootLogin without-password`



The screenshot shows a Kali Linux desktop environment with a terminal window open. The terminal window has a title bar that says "Kali 2.0". Below the title bar is a menu bar with "Applications", "Places", and "gedit". The main window title is "sshd\_config" and the file path is "/etc/ssh". The content of the file is as follows:

```
#ListenAddress 0.0.0.0
Protocol 2
# HostKeys for protocol version 2
HostKey /etc/ssh/ssh_host_rsa_key
HostKey /etc/ssh/ssh_host_dsa_key
HostKey /etc/ssh/ssh_host_ecdsa_key
HostKey /etc/ssh/ssh_host_ed25519_key
#Privilege Separation is turned on for security
UsePrivilegeSeparation yes

# Lifetime and size of ephemeral version 1 server key
KeyRegenerationInterval 3600
ServerKeyBits 1024

# Logging
SyslogFacility AUTH
LogLevel INFO

# Authentication:
LoginGraceTime 120
PermitRootLogin without-password
StrictModes yes

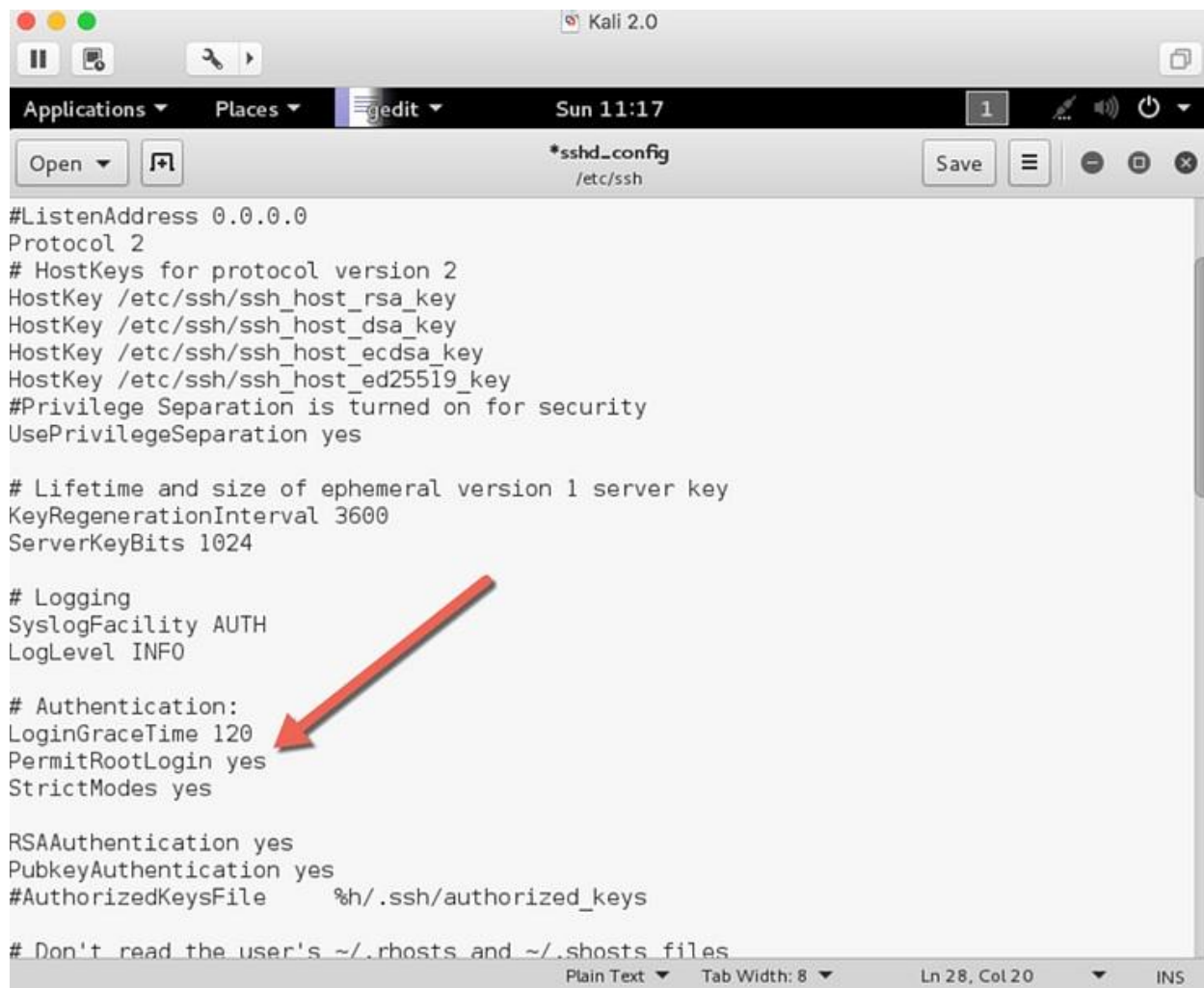
RSAAuthentication yes
PubkeyAuthentication yes
#AuthorizedKeysFile      %h/.ssh/authorized_keys

# Don't read the user's ~/.rhosts and ~/.shosts files
```

A red arrow points to the line "PermitRootLogin without-password".





to

**PermitRootLogin yes**



Kali 2.0

Applications ▾ Places ▾ gedit ▾ Sun 11:17 1

Open ▾  \*sshd\_config /etc/ssh Save   

```
#ListenAddress 0.0.0.0
Protocol 2
# HostKeys for protocol version 2
HostKey /etc/ssh/ssh_host_rsa_key
HostKey /etc/ssh/ssh_host_dsa_key
HostKey /etc/ssh/ssh_host_ecdsa_key
HostKey /etc/ssh/ssh_host_ed25519_key
#Privilege Separation is turned on for security
UsePrivilegeSeparation yes

# Lifetime and size of ephemeral version 1 server key
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# Logging
SyslogFacility AUTH
LogLevel INFO

# Authentication:
LoginGraceTime 120
PermitRootLogin yes
StrictModes yes

RSAAuthentication yes
PubkeyAuthentication yes
#AuthorizedKeysFile      %h/.ssh/authorized_keys

# Don't read the user's ~/.rhosts and ~/.shosts files
```

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c) restart SSH:

```
sudo service ssh restart
```

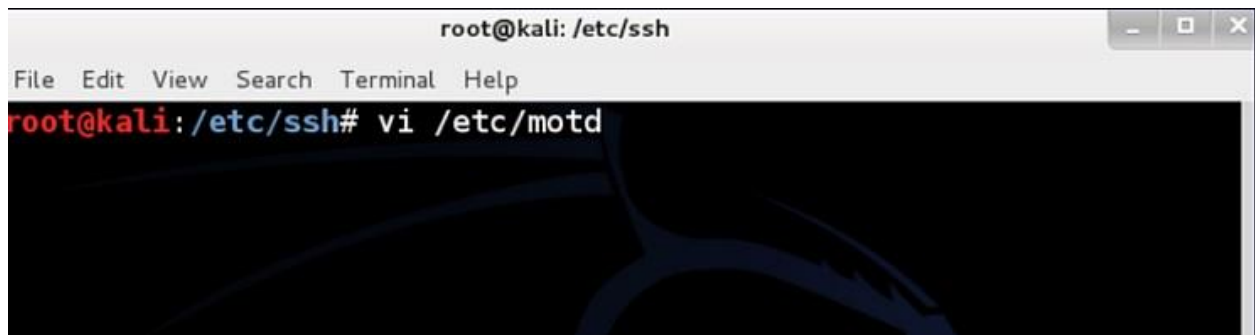
d) Make sure SSH service always restarts on reboot in Kali Linux

```
update-rc.d -f ssh enable 2 3 4 5
```

## 5) MOTD – Message of the Day banner

```
root@kali:~# vi /etc/motd
```

```
root@kali:~# service ssh restart
```



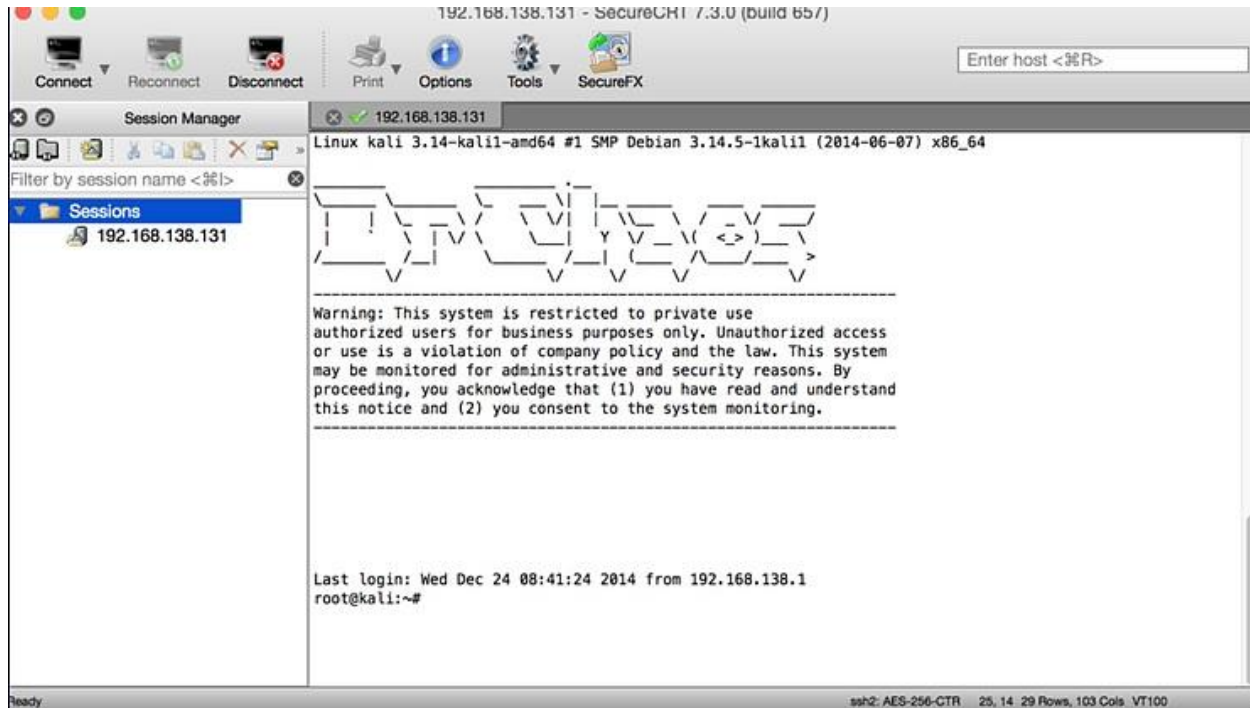
a) MOTD – Message of the Day banner! personally like combining some ASCII art with my message of the day. Go to <http://patorjk.com/software/taag> to create some of your own ASCII art



Dr. Chaos



## 5) Enjoy remote access via SSH to your Kali Linux





### 3. Allow bob to login into kali from git bash without a password using keys.

- First you'll want to cd into your .ssh directory. Open up the terminal and run:

```
cd ~/.ssh && ssh-keygen
```

- Next you need to copy this to your clipboard.
  - On OS X run: `cat id_rsa.pub | pbcopy`
  - On Linux run: `cat id_rsa.pub | xclip`
  - On Windows (via Cygwin/Git Bash) run: `cat id_rsa.pub | clip`
- Add your key to your account via the website.
- Finally setup your .gitconfig.
  - `git config --global user.name "bob"`
  - `git config --global user.email bob@...` (don't forget to restart your command line to make sure the config is reloaded)