

# Linux Basic Commands

## Launching the instance

The screenshot displays the AWS Management Console interface with a terminal window open, showing the process of launching an Ubuntu instance.

**AWS Management Console:**

- Left Sidebar:** EC2 Dashboard, Events, Tags, Reports, Limits, INSTANCES, Launch Templates, Spot Requests, Reserved Instances, Dedicated Hosts, Scheduled Instances, Capacity Reservations, IMAGES, AMIs, Bundle Tasks, ELASTIC BLOCK STORE, Volumes.
- Main Content Area:** Shows the 'Launch Instance' wizard. The 'Name' field is filled with 'MyFirstUbuntuEC2'. The 'Instance type' is 't2.micro'.
- Terminal Window:** Shows the command `ssh -i MyFirstUbuntuEC2.pem ubuntu@52.87.163.230` being executed. The output shows the SSH connection details, including the host key fingerprint and the system information of the Ubuntu instance.

**Terminal Output:**

```
~$ ssh -i MyFirstUbuntuEC2.pem ubuntu@52.87.163.230
The authenticity of host '52.87.163.230 (52.87.163.230)' can't be established.
ECDSA key fingerprint is SHA256:vVwRk9u304CiQveiln5jC08e9P5wLQ2XfMwHGNFjjYo.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '52.87.163.230' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04.2 LTS (GNU/Linux 4.15.0-1044-aws x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Sat Aug 10 10:56:36 UTC 2019

System load: 0.32          Processes: 92
Usage of /: 15.8% of 7.69GB Users logged in: 0
Memory usage: 15%         IP address for eth0: 172.31.81.56
Swap usage: 0%

 * Keen to learn Istio? It's included in the single-package MicroK8s.
   https://snapcraft.io/microk8s

 * Canonical Livepatch is available for installation.
   - Reduce system reboots and improve kernel security. Activate at:
     https://ubuntu.com/livepatch

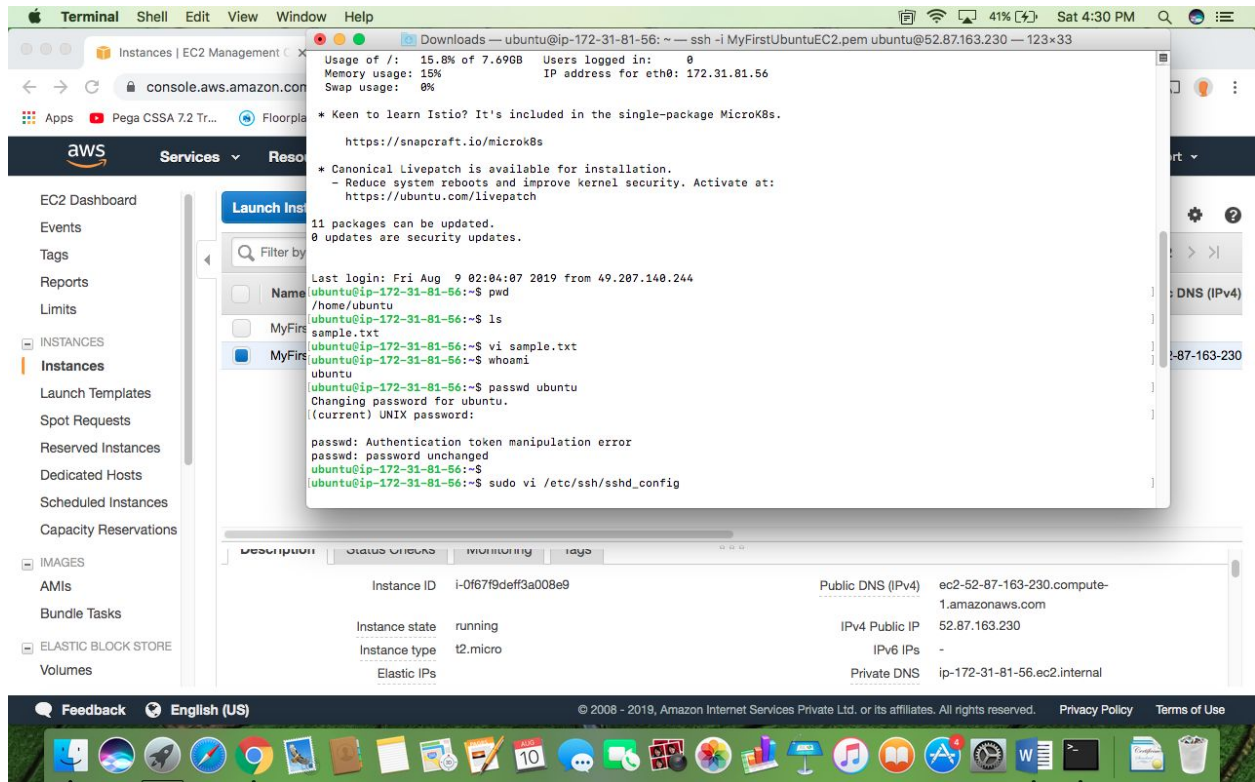
11 packages can be updated.
0 updates are security updates.

Last login: Fri Aug 9 02:04:07 2019 from 49.207.140.244
ubuntu@ip-172-31-81-56:~$
```

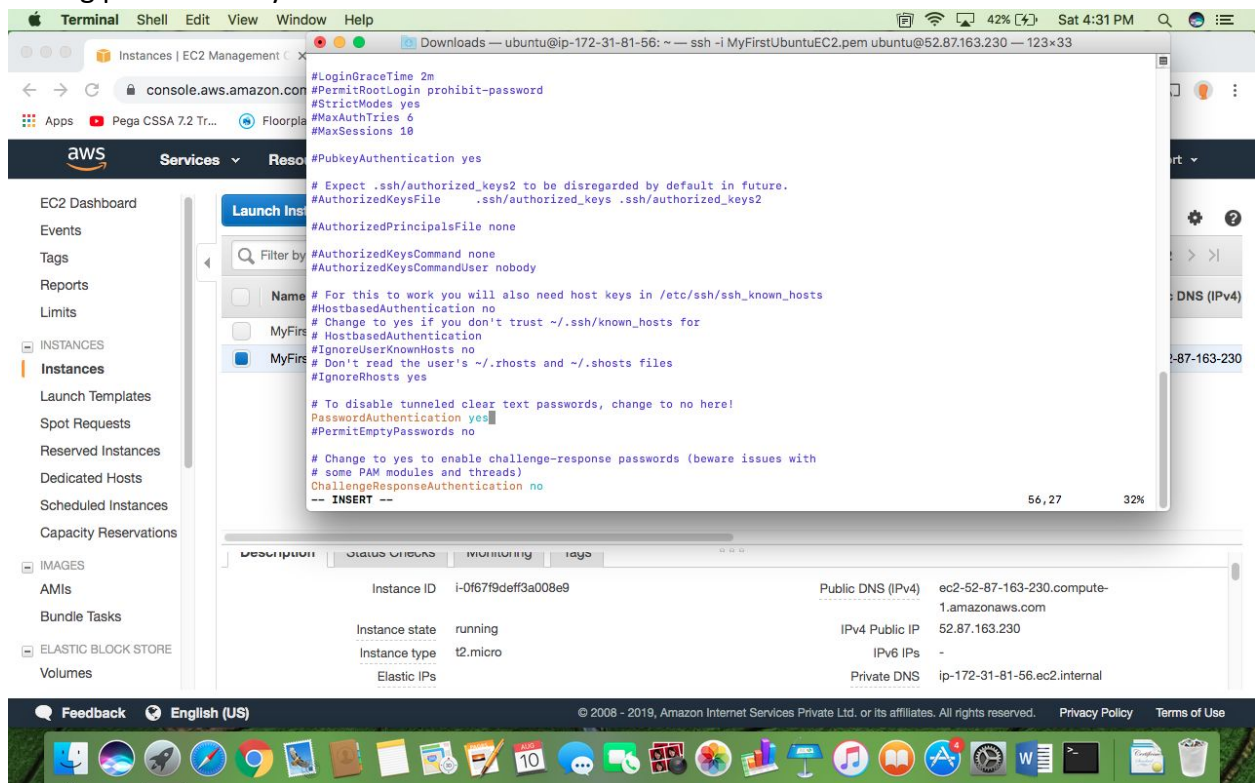
**AWS Instance Details Table:**

Description	Status Checks	Monitoring	Tags
Instance ID	i-0f67f9deff3a008e9		
Instance state	running		
Instance type	t2.micro		
Elastic IPs			
Public DNS (IPv4)	ec2-52-87-163-230.compute-1.amazonaws.com		
IPv4 Public IP	52.87.163.230		
IPv6 IPs	-		
Private DNS	ip-172-31-81-56.ec2.internal		

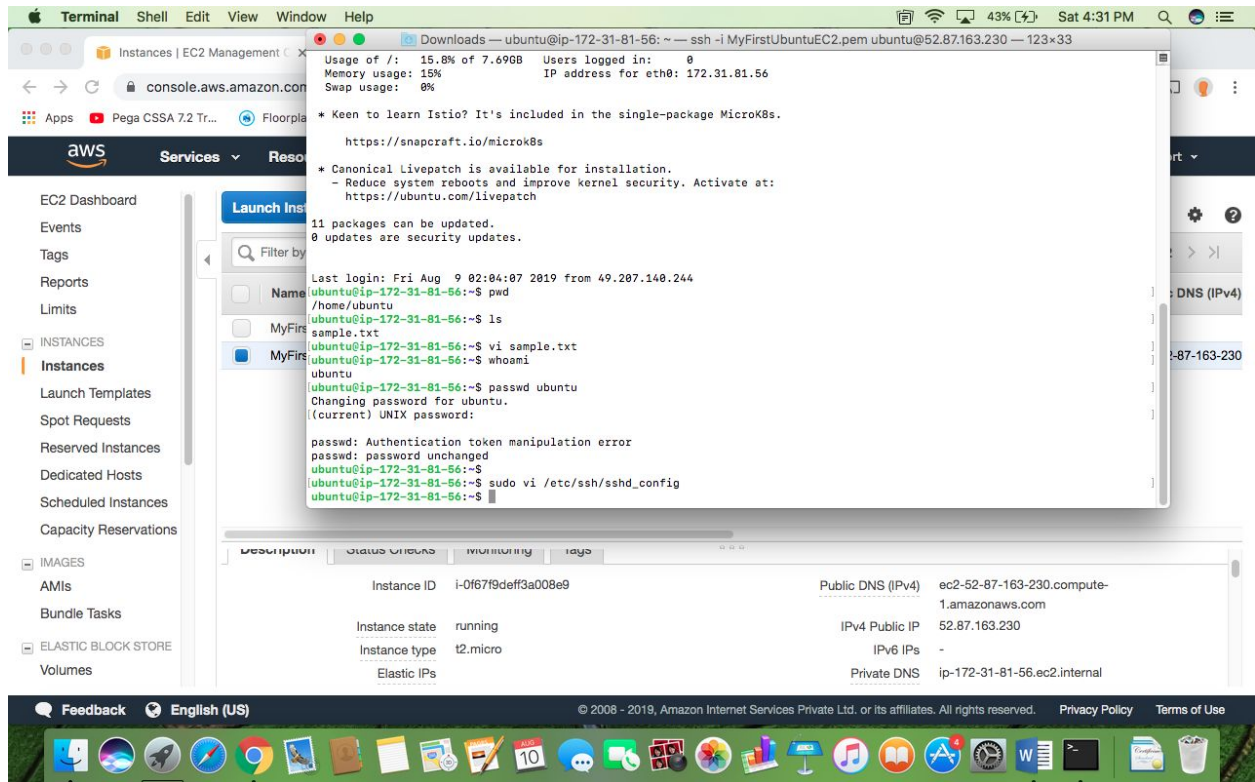
## sshd config restart



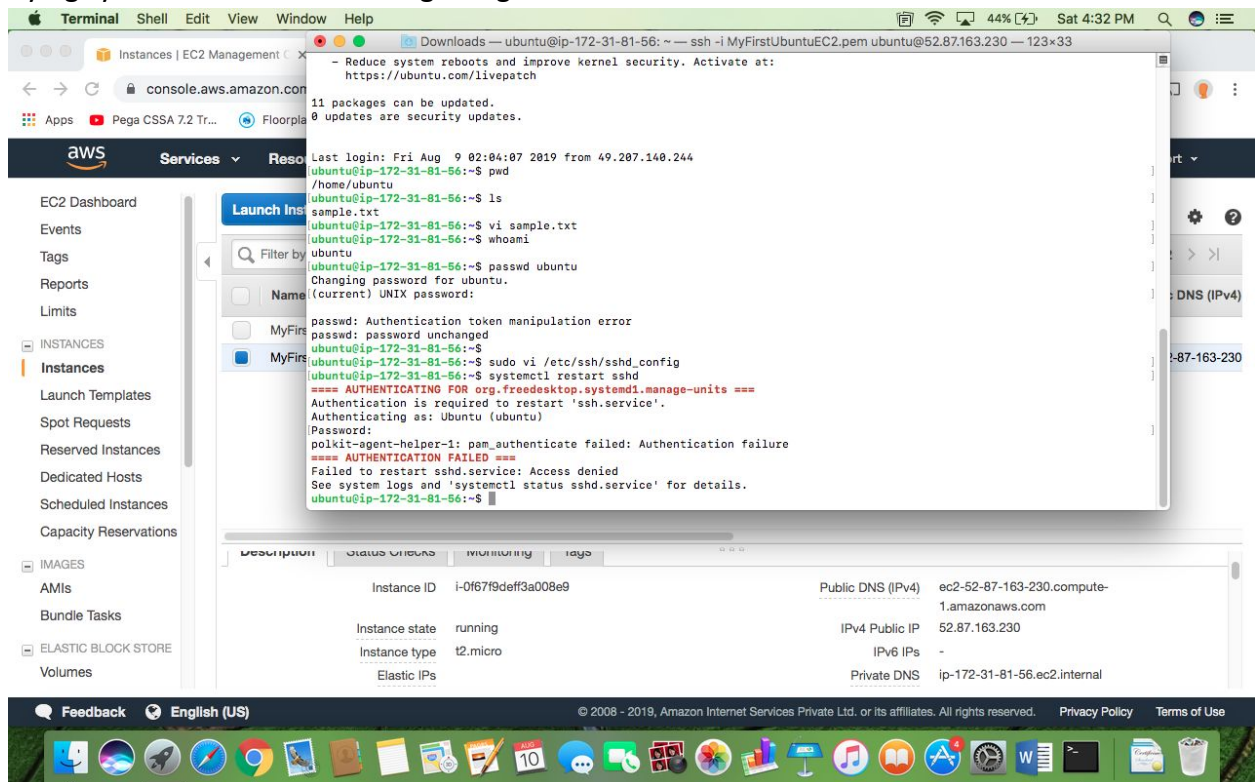
## Setting password as yes for Ubuntu



trying without sudo – getting error



trying systemctl without sudo – getting error





restart the sshd\_config with sudo access

The screenshot shows the AWS Management Console with the 'Instances' page selected. A terminal window is open, displaying the following commands and output:

```
ubuntu@ip-172-31-81-56:~$ sudo vi /etc/ssh/sshd_config
ubuntu@ip-172-31-81-56:~$ systemctl restart sshd
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====
Authentication is required to restart 'ssh.service'.
Authenticating as: Ubuntu (ubuntu)
Password:
polkit-agent-helper-1: pam_authenticate failed: Authentication failure
==== AUTHENTICATION FAILED ====
Failed to restart sshd.service: Access denied
See system logs and 'systemctl status sshd.service' for details.
ubuntu@ip-172-31-81-56:~$ sudo systemctl restart sshd
ubuntu@ip-172-31-81-56:~$ sudo systemctl status sshd
● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: enabled)
   Active: active (running) since Sat 2019-08-10 11:03:04 UTC; 17s ago
     Process: 1883 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUCCESS)
    Main PID: 1894 (sshd)
      Tasks: 1 (limit: 1152)
     CGroup: /system.slice/ssh.service
            └─1894 /usr/sbin/sshd -D

Aug 10 11:03:04 ip-172-31-81-56 systemd[1]: Starting OpenBSD Secure Shell server...
Aug 10 11:03:04 ip-172-31-81-56 sshd[1894]: Server listening on 0.0.0.0 port 22.
Aug 10 11:03:04 ip-172-31-81-56 sshd[1894]: Server listening on :: port 22.
Aug 10 11:03:04 ip-172-31-81-56 systemd[1]: Started OpenBSD Secure Shell server.
ubuntu@ip-172-31-81-56:~$
```

The terminal output shows that the sshd service was successfully restarted and is now running. The AWS console shows the instance details for 'MyFirstUbuntuEC2'.

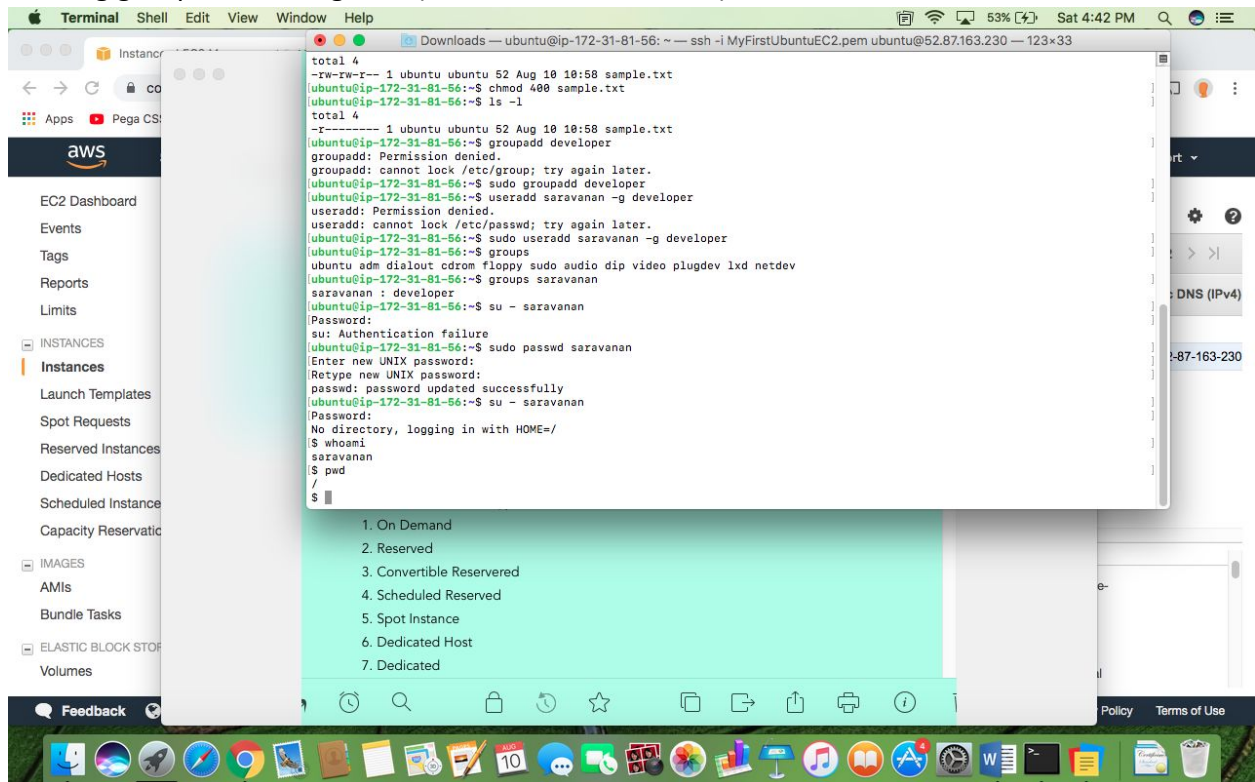
chmod 400 for the file

The screenshot shows the AWS Management Console with the 'Instances' page selected. A terminal window is open, displaying the following commands and output:

```
ubuntu@ip-172-31-81-56:~$ pwd
/home/ubuntu
ubuntu@ip-172-31-81-56:~$ ls
sample.txt
ubuntu@ip-172-31-81-56:~$ ls -l
total 4
-rw-rw-r-- 1 ubuntu ubuntu 52 Aug 10 10:58 sample.txt
ubuntu@ip-172-31-81-56:~$ chmod 400 sample.txt
ubuntu@ip-172-31-81-56:~$ ls -l
total 4
-r----- 1 ubuntu ubuntu 52 Aug 10 10:58 sample.txt
ubuntu@ip-172-31-81-56:~$
```

The terminal output shows that the file 'sample.txt' was successfully created and its permissions were changed to '400'. The AWS console shows the instance details for 'MyFirstUbuntuEC2'.

creating group and adding user (with and without sudo)



```
total 4
-rw-rw-r-- 1 ubuntu ubuntu 52 Aug 10 10:58 sample.txt
ubuntu@ip-172-31-81-56:~$ chmod 400 sample.txt
ubuntu@ip-172-31-81-56:~$ ls -l
total 4
-r----- 1 ubuntu ubuntu 52 Aug 10 10:58 sample.txt
ubuntu@ip-172-31-81-56:~$ groupadd developer
groupadd: Permission denied.
groupadd: cannot lock /etc/group; try again later.
ubuntu@ip-172-31-81-56:~$ sudo groupadd developer
ubuntu@ip-172-31-81-56:~$ useradd saravanan -g developer
useradd: Permission denied.
useradd: cannot lock /etc/passwd; try again later.
ubuntu@ip-172-31-81-56:~$ sudo useradd saravanan -g developer
ubuntu@ip-172-31-81-56:~$ groups
ubuntu adm dialout cdrom floppy sudo audio dip video plugdev lxd netdev
saravanan : developer
ubuntu@ip-172-31-81-56:~$ su - saravanan
Password:
su: Authentication failure
ubuntu@ip-172-31-81-56:~$ sudo passwd saravanan
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
ubuntu@ip-172-31-81-56:~$ su - saravanan
Password:
No directory, logging in with HOME=/
$ whoami
saravanan
$ pwd
/
$
```

1. On Demand  
2. Reserved  
3. Convertible Reserved  
4. Scheduled Reserved  
5. Spot Instance  
6. Dedicated Host  
7. Dedicated

list of all softwares

Terminal Shell Edit View Window Help

Instances | EC2 Management | Apt Get List Installed | List Inst

Rose Web Services L.L.C. Downloads — root@ip-172-31-81-56: /home/ubuntu — ssh -i MyFirstUbuntuEC2.pem ubuntu@52.87.163.230 — 123x33

1. List the installed software packages on your machine

First of all, connect to your Linux instance using the terminal.

sudo apt list --installed

The output of the command will be displayed in the terminal window, depending on which packages are installed on your machine.

Listing...

```
accl/xenial,now 2.2.52-3 amd64 [installed]
adduser/xenial,now 3.116ubuntu1 all [installed,automatic]
apache2/xenial-updates,now 2.4.18-2ubuntu3.1 amd64 [installed]
apache2-bin/xenial-updates,now 2.4.18-2ubuntu3.1 amd64 [installed]
apache2-data/xenial-updates,now 2.4.18-2ubuntu3.1 amd64 [installed]
apache2-doc/xenial-updates,now 2.4.18-2ubuntu3.1 amd64 [installed]
apache2-utils/xenial-updates,now 2.4.18-2ubuntu3.1 amd64 [installed]
apparmor/xenial-updates,now 2.10.95-0ubuntu2.5 amd64 [installed,automatic]
apt/xenial-updates,now 1.2.19 amd64 [installed]
apt-utils/xenial-updates,now 1.2.19 amd64 [installed]
```

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Live Chat

## installed softwares

Terminal Shell Edit View Window Help

Instances | EC2 Management | Apt Get List Installed | List Inst

Rose Web Services L.L.C. Downloads — root@ip-172-31-81-56: /home/ubuntu — ssh -i MyFirstUbuntuEC2.pem ubuntu@52.87.163.230 — 123x33

1. List the installed software packages on your machine

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Listing...

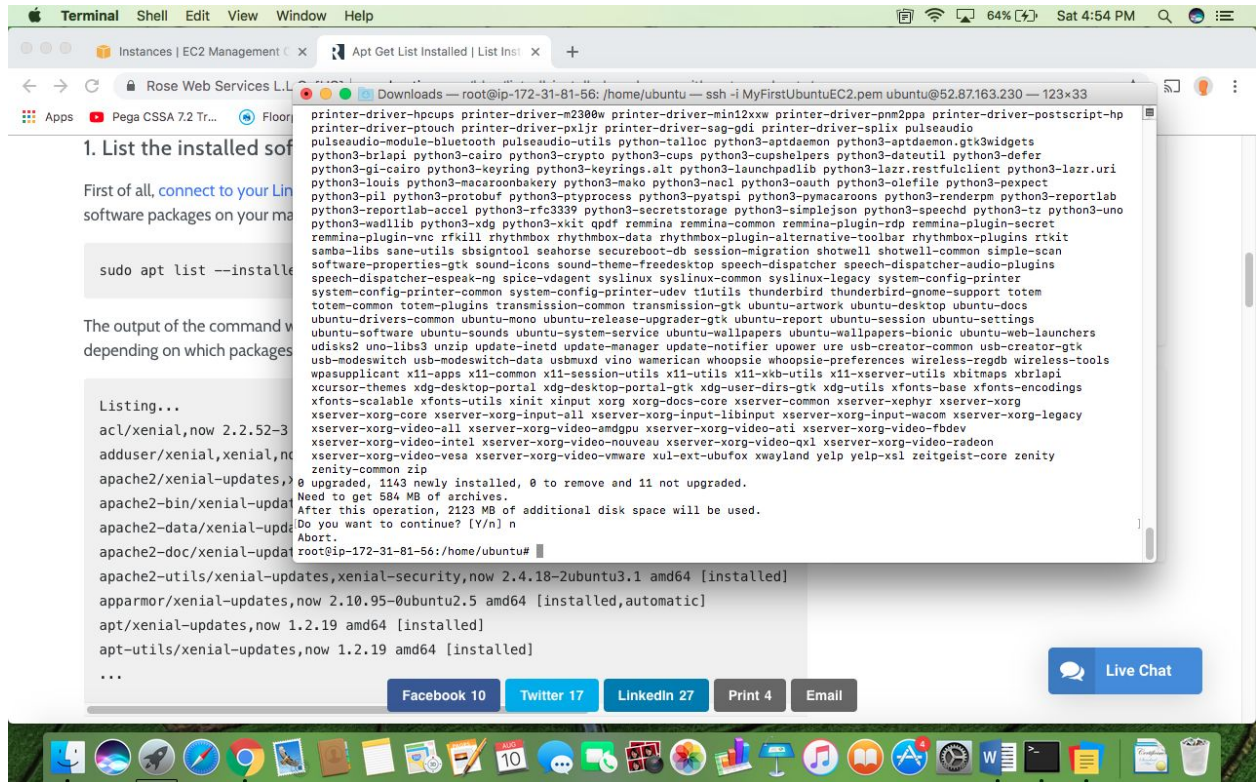
```
accl/bionic,now 2.2.52-3build1 amd64 [installed,automatic]
adduser/bionic,now 3.116ubuntu1 all [installed,automatic]
apache2/bionic-updates,now 2.4.29-1ubuntu4.8 amd64 [installed]
apache2-bin/bionic-updates,now 2.4.29-1ubuntu4.8 amd64 [installed,automatic]
apache2-data/bionic-updates,now 2.4.29-1ubuntu4.8 all [installed,automatic]
apache2-utils/bionic-updates,now 2.4.29-1ubuntu4.8 amd64 [installed,automatic]
apparmor/bionic-updates,bionic-security,now 2.12.4ubuntu5.1 amd64 [installed,automatic]
apt/bionic-updates,bionic-security,now 2.20.9-0ubuntu7.7 all [installed,automatic]
apt-symptoms/bionic,now 0.20 all [installed,automatic]
apt-utils/bionic-updates,now 1.6.11 amd64 [installed,automatic]
at/bionic,now 3.1.20-3.1ubuntu2 amd64 [installed,automatic]
base-files/bionic,now 10.1ubuntu2.5 amd64 [installed,upgradeable to: 10.1ubuntu2.6]
base-passwd/bionic,now 3.5.44 amd64 [installed,automatic]
bash/bionic-updates,now 4.4.18-2ubuntu1.2 amd64 [installed]
bash-completion/bionic,now 1:2.8-1ubuntu1 all [installed,automatic]
bc/bionic,now 1.07.1-2 amd64 [installed,automatic]
bcbio/bionic,now 1.0.8-2build1 amd64 [installed,automatic]
bind9-host/bionic-updates,bionic-security,now 1:9.11.3-0ubuntu1.8 amd64 [installed,automatic]
bsdmainutils/bionic,now 11.1.2ubuntu1 amd64 [installed,automatic]
bsdutils/bionic-updates,now 1:2.31.1-0.4ubuntu3.3 amd64 [installed,automatic]
btrfs-progs/bionic,now 4.15.1-1build1 amd64 [installed,automatic]
btrfs-tools/bionic,now 4.15.1-1build1 amd64 [installed,automatic]
busybox-initramfs/bionic-updates,bionic-security,now 1:1.27.2-2ubuntu3.2 amd64 [installed,automatic]
busybox-static/bionic-updates,bionic-security,now 1:1.27.2-2ubuntu3.2 amd64 [installed,automatic]
byobu/bionic,now 5.125-0ubuntu1 all [installed,automatic]
bz2/bionic-updates,bionic-security,now 1.0.6-8ubuntu0.2 amd64 [installed,automatic]
ca-certificates/bionic,bionic-updates,now 20180409 all [installed,automatic]
cloud-guest-utils/bionic,now 0.30-0ubuntu5 all [installed,automatic]
apache2-utils/xenial-updates,xenial-security,now 2.4.18-2ubuntu3.1 amd64 [installed]
apparmor/xenial-updates,now 2.10.95-0ubuntu2.5 amd64 [installed,automatic]
apt/xenial-updates,now 1.2.19 amd64 [installed]
apt-utils/xenial-updates,now 1.2.19 amd64 [installed]
```

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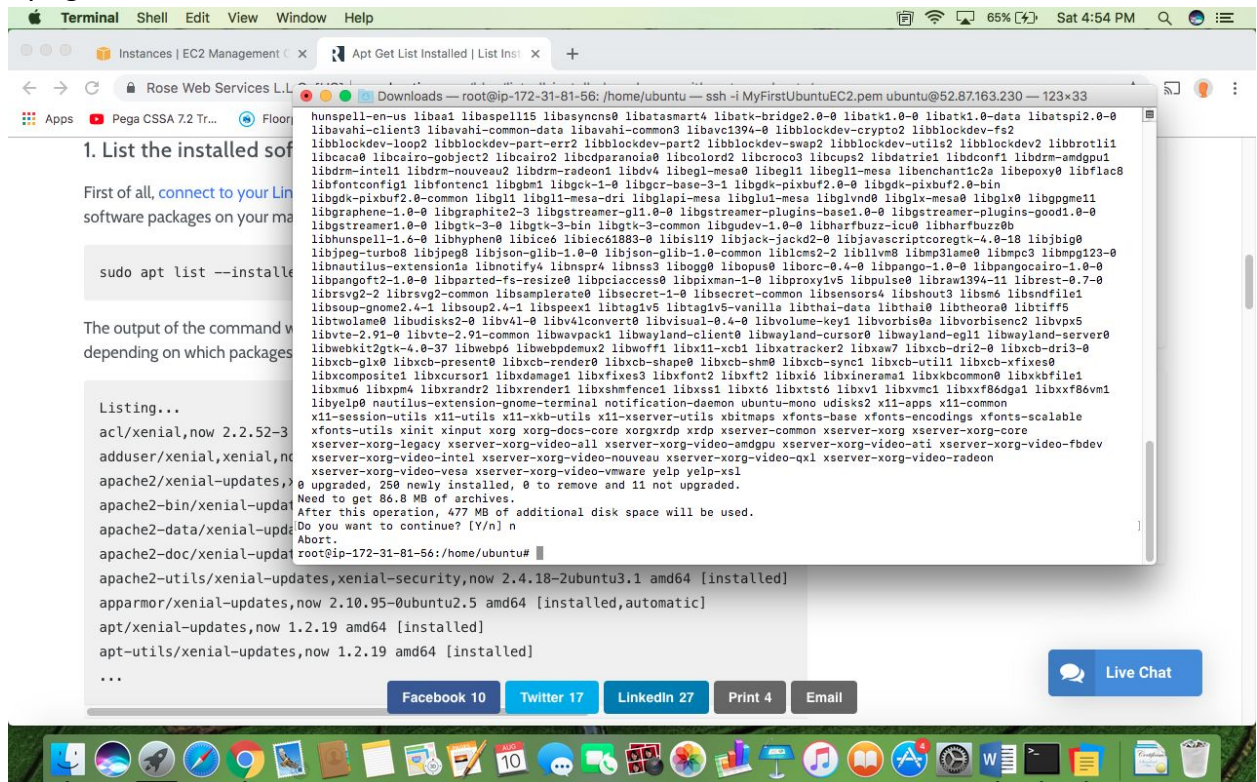
Live Chat



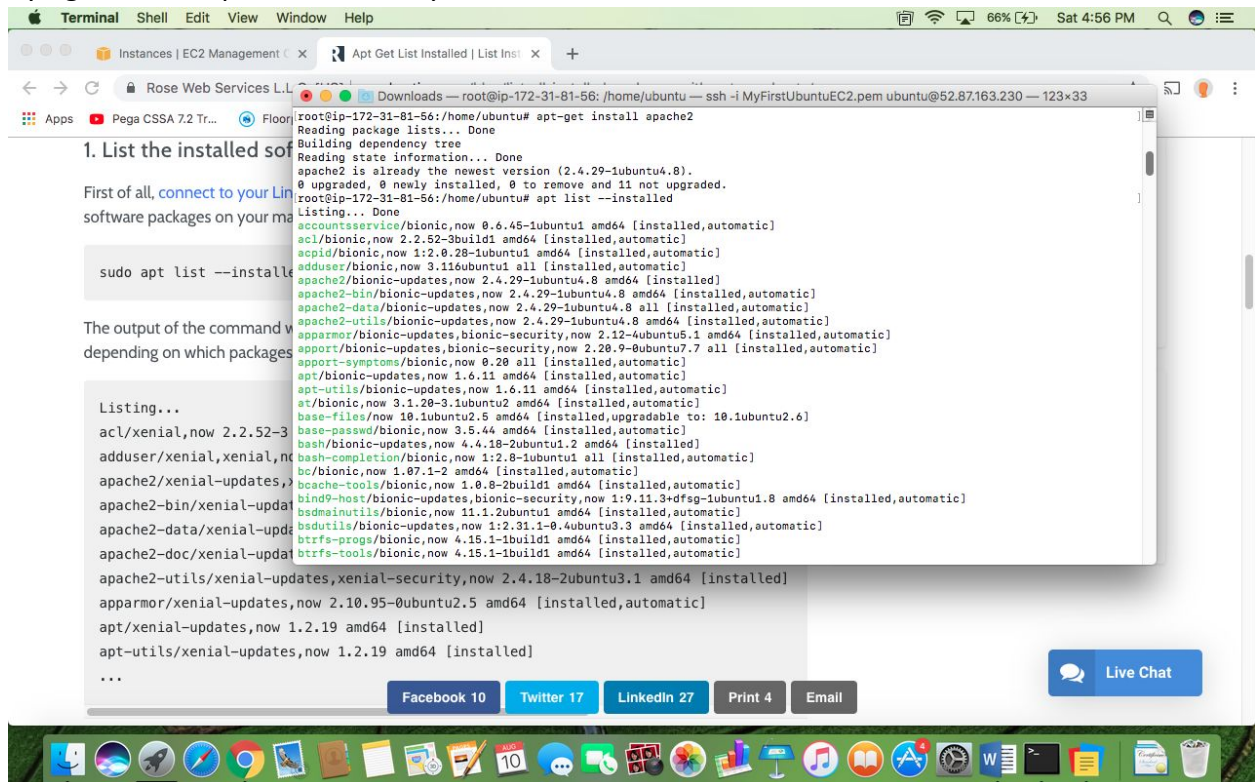
## trying the Ubuntu desktop



## trying XRDP

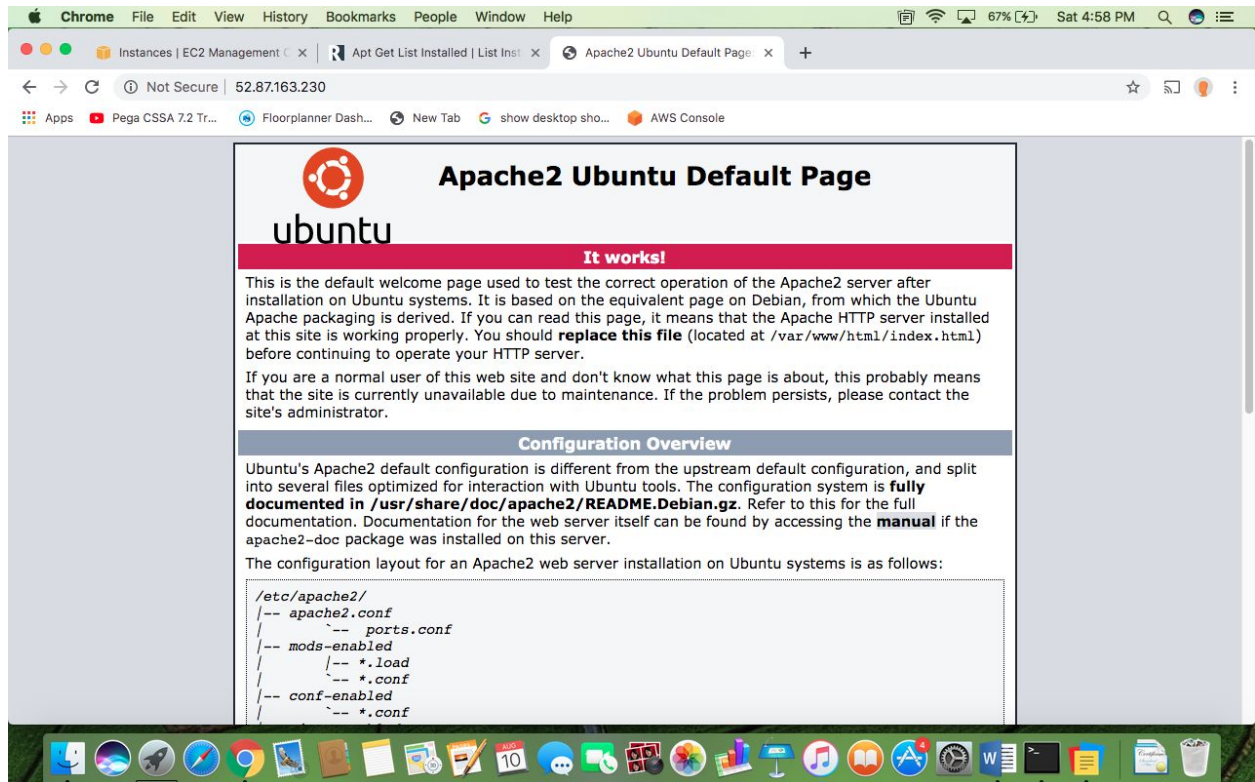


trying to install apache2 – already installed

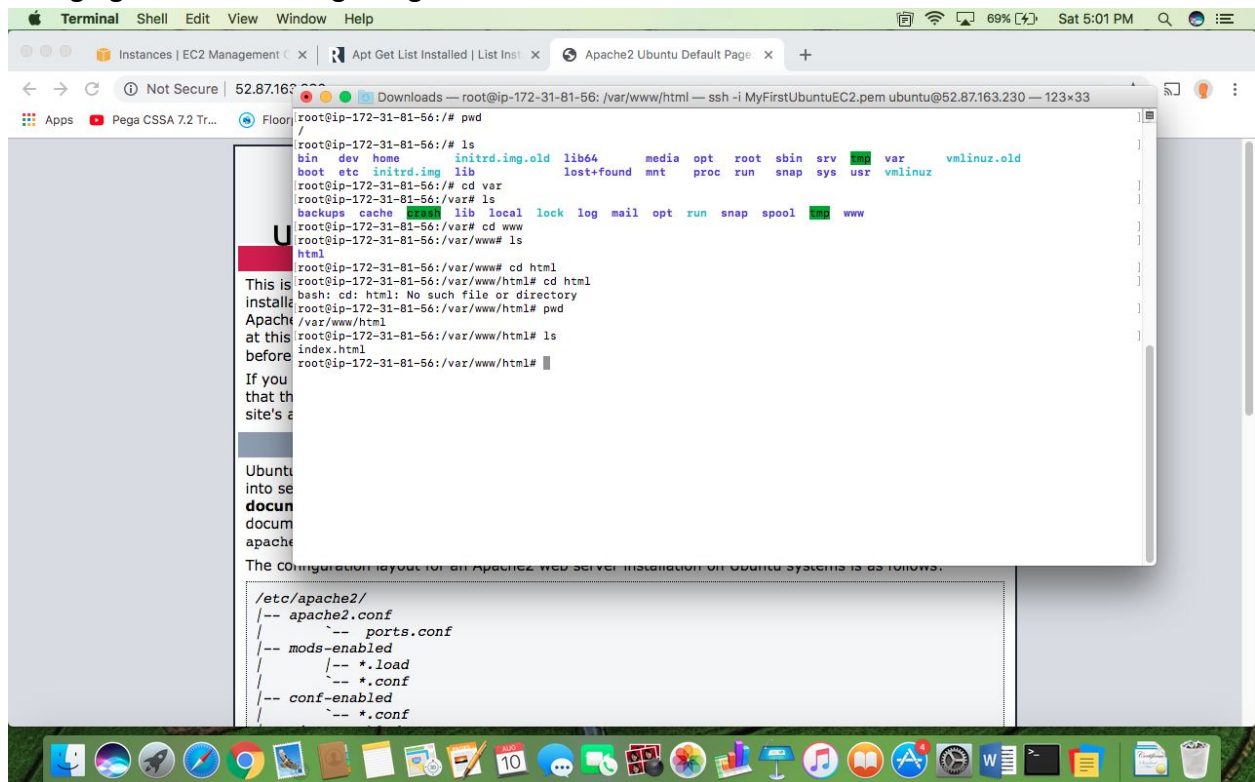


Apache home page

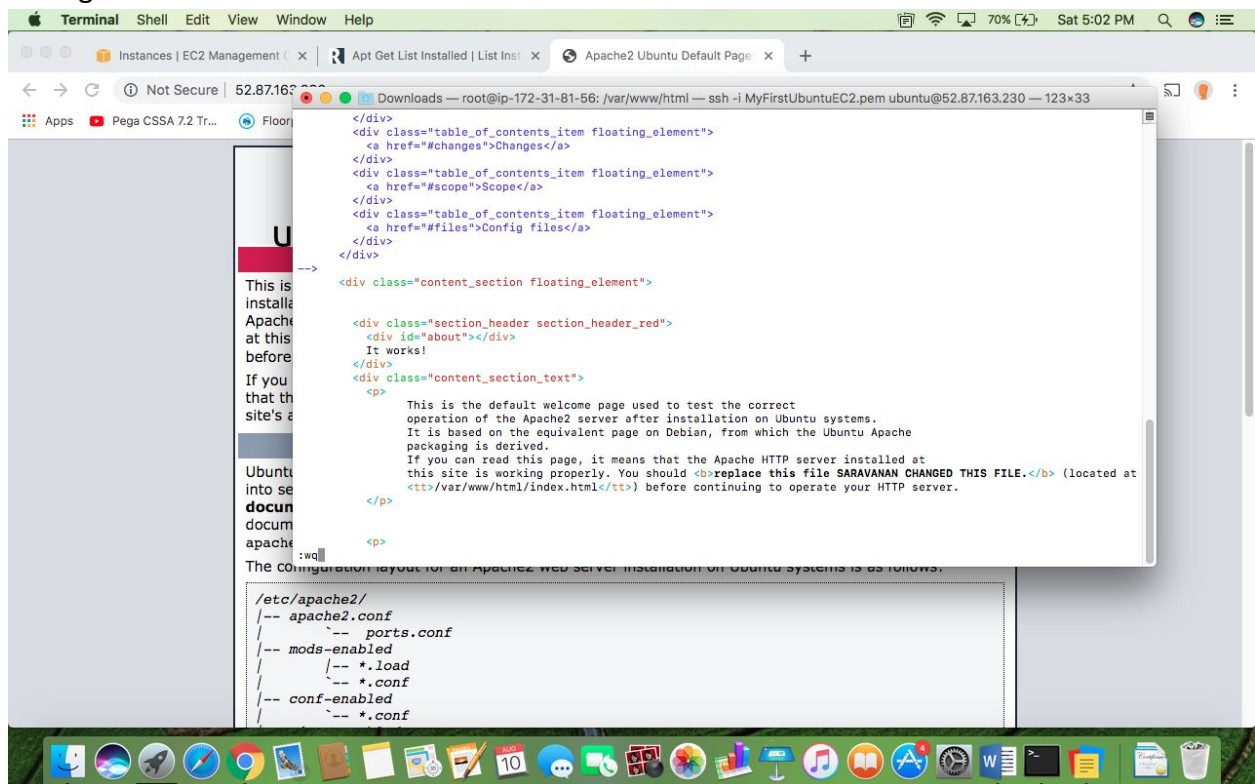




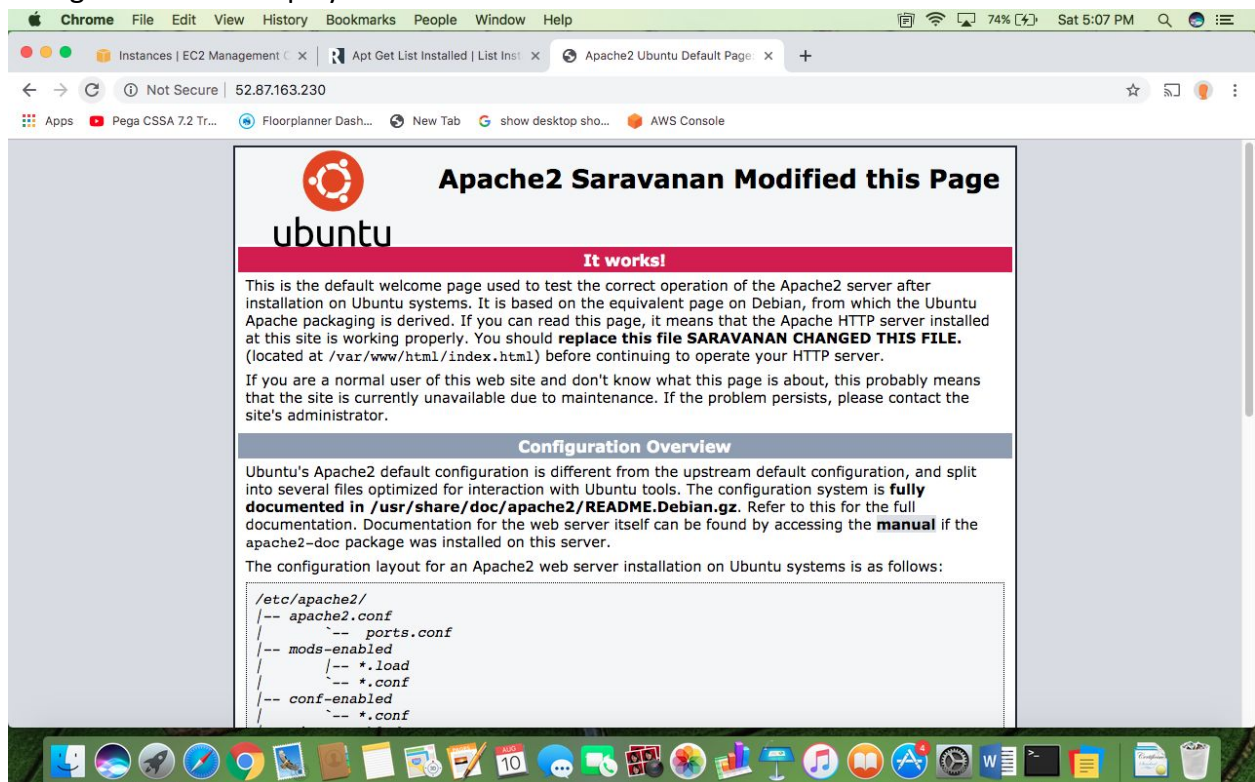
## Changing the Index file – getting into the location



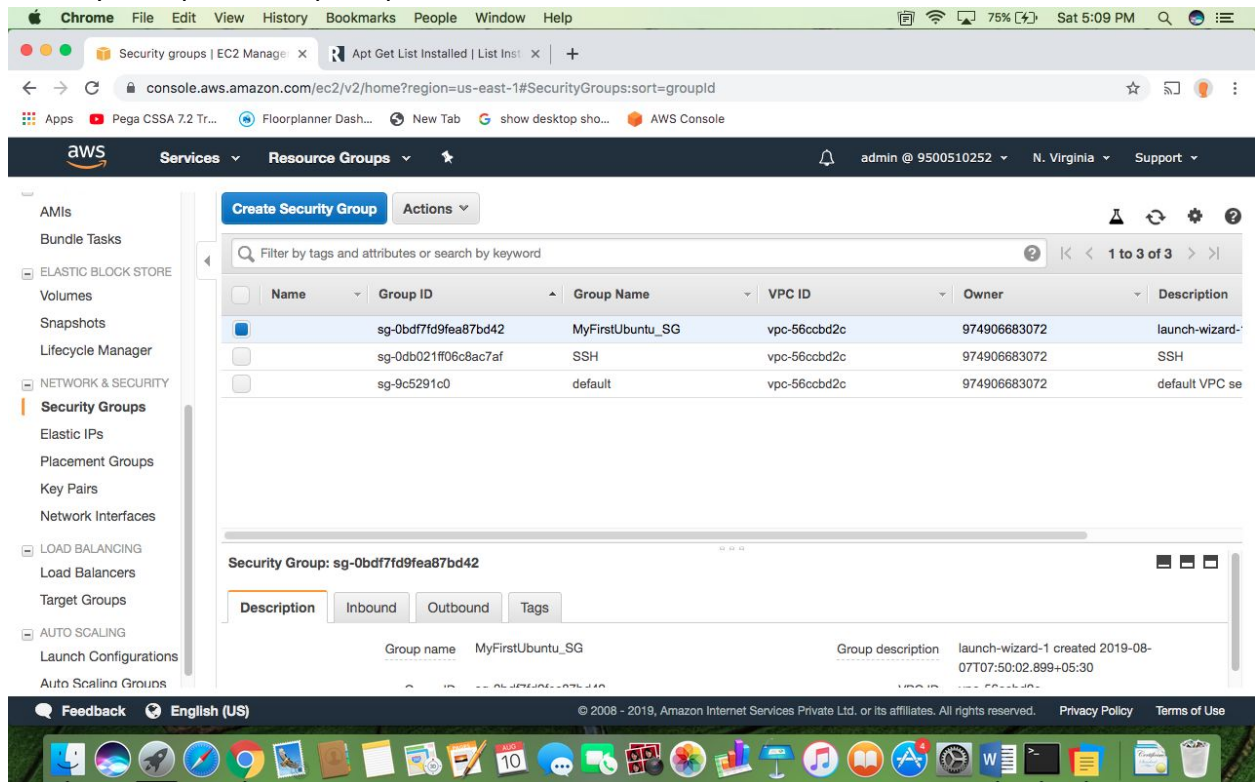
## Editing the file



## Changed index file displayed



## Security Group – for Http/Https



The screenshot shows the AWS Management Console interface. The left sidebar contains navigation links for various AWS services, including AMIs, Elastic Block Store, and Network & Security. The main content area displays the 'Security Groups' page. A table lists the security groups, and the details for the selected group 'MyFirstUbuntu\_SG' are shown below.

Name	Group ID	Group Name	VPC ID	Owner	Description
<input checked="" type="checkbox"/>	sg-0bdf7fd9fea87bd42	MyFirstUbuntu_SG	vpc-56ccbd2c	974906683072	launch-wizard-
<input type="checkbox"/>	sg-0db021f06c8ac7af	SSH	vpc-56ccbd2c	974906683072	SSH
<input type="checkbox"/>	sg-9c5291c0	default	vpc-56ccbd2c	974906683072	default VPC se

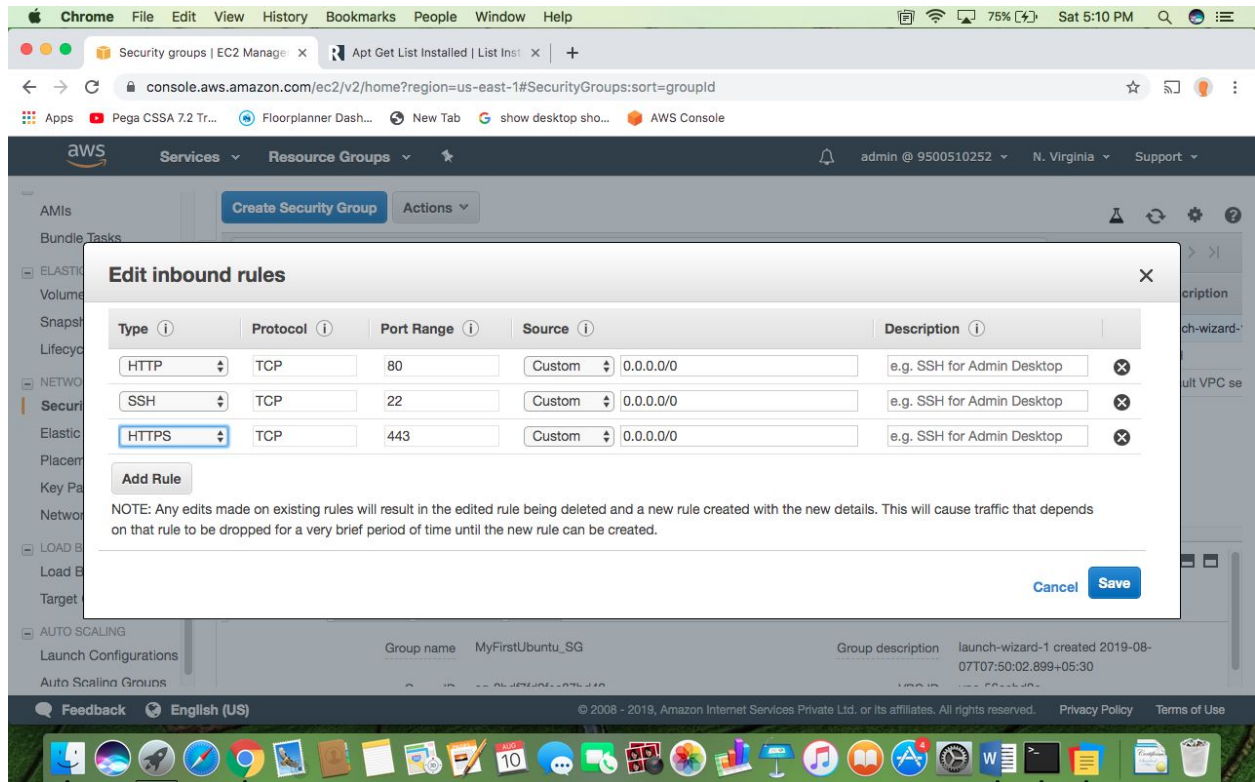
Security Group: sg-0bdf7fd9fea87bd42

Description Inbound Outbound Tags

Group name MyFirstUbuntu\_SG Group description launch-wizard-1 created 2019-08-07T07:50:02.899+05:30

Added Https inbound rule for sample.





By Saravanan