Vanier College

Faculty of Careers and Technical Programs

Department of Computer Science Technology

Advanced UNIX

Lab #8

Title: System Initialization, X-Windows and Network Security

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Submitted to Florin Pilat

November 13, 2020

Review Questions *(p.378-381)*:

1. C) `xvidtune`
2. B) LILO needs to be reinstalled after it has been modified.
3. C) /etc/init.d
4. C) 0
5. D) /etc/inittab
6. C) `startx`
7. B) Either the MRB/GPT or the active partition can contain the boot loader.
8. D) (hd2, 1)
9. A) X.org
   D) XFree86
10. A) /etc/rc2.d
11. A) /boot
12. C) init
13. B) `init 1`
14. A) seconds
15. D) `grub2-mkconfig`
16. C) Modify the daemon configuration file within the /etc/init directory.
17. B) `systemctl stop lala.service`
18. A) chkconfig --level 123 lala on
19. B) graphical.target
20. C) `single`

Project 8.3 *(p.383-384)*:

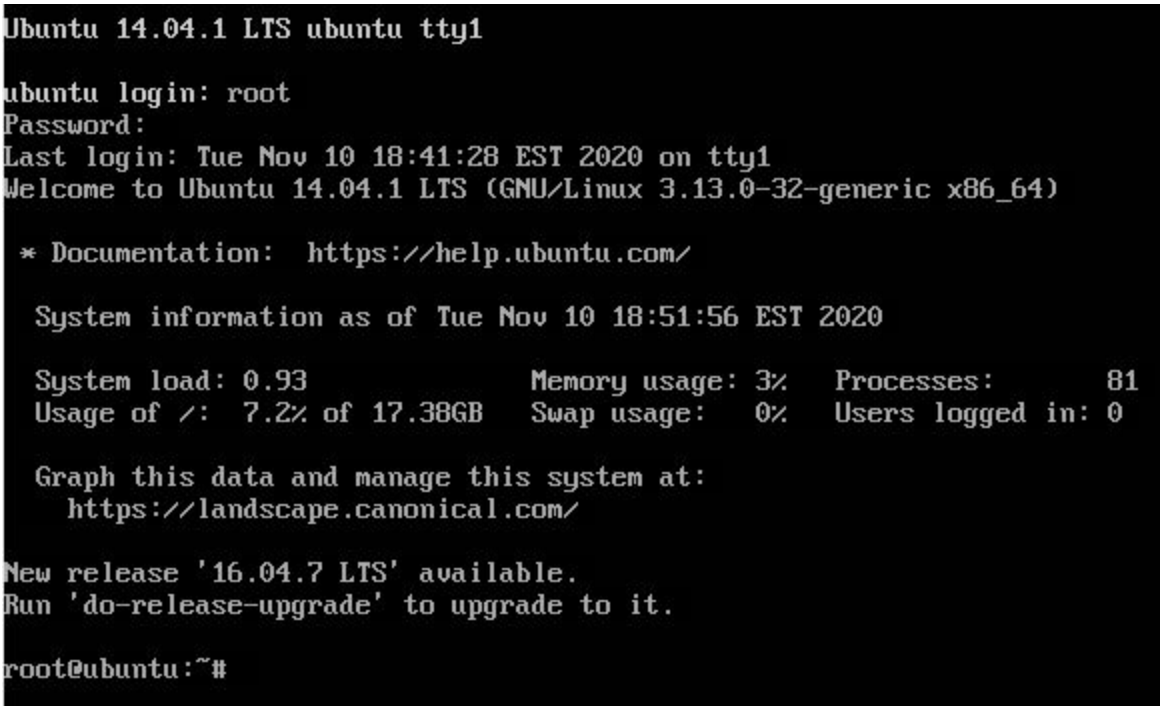
Initial Commands

```
Ubuntu 14.04.1 LTS ubuntu tty1

ubuntu login: root
Password:
Last login: Tue Nov 10 18:08:56 EST 2020 on tty1
Welcome to Ubuntu 14.04.1 LTS (GNU/Linux 3.13.0-32-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

  System information as of Tue Nov 10 18:11:47 EST 2020

  System load:  2.47              Processes:           93
  Usage of /:   6.9% of 17.38GB   Users logged in:     0
  Memory usage: 4%                IP address for eth0: 192.168.2.103
  Swap usage:   0%

  Graph this data and manage this system at:
    https://landscape.canonical.com/

New release '16.04.7 LTS' available.
Run 'do-release-upgrade' to upgrade to it.
```

```
root@ubuntu:~# apt-get -y install postgresql
Reading package lists... Done
Building dependency tree
Reading state information... Done
postgresql is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 220 not upgraded.
```

```
root@ubuntu:~# apt-get -y install ssh
Reading package lists... Done
Building dependency tree
Reading state information... Done
ssh is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 220 not upgraded.
```

1.



2. Our current runlevel is in Multiuser Mode since the number 2 is displayed and our most recent runlevel is non-existent since “N’ specifies that there is no previous runlevel.

3. Basically, the contents in the /etc/init.d directory represent scripts that start or stop a specific daemon and each file from an /etc/rc[runlevel].d directory is a symbolic link to an executable rc script in this directory.

4. Essentially, the contents in the /etc/init directory represent the configuration files for each daemon, which indicates the standard wildcard notation to identify the runlevels in which the daemon should be started or stopped.

5. The ssh daemon started in runlevels 2 (Multiuser Mode), 3 (Extended Multiuser Mode), 4 (Not Used) and 5 (Graphical Mode).

```
root@ubuntu:~# cat /etc/init/ssh.conf
# ssh - OpenBSD Secure Shell server
#
# The OpenSSH server provides secure shell access to the system.

description     "OpenSSH server"

start on runlevel [2345]
stop on runlevel [!2345]

respawn
respawn limit 10 5
umask 022

env SSH_SIGSTOP=1
expect stop

# 'sshd -D' leaks stderr and confuses things in conjunction with 'console log'
console none

pre-start script
    test -x /usr/sbin/sshd || { stop; exit 0; }
    test -e /etc/ssh/sshd_not_to_be_run && { stop; exit 0; }

    mkdir -p -m0755 /var/run/sshd
end script

# if you used to set SSHD_OPTS in /etc/default/ssh, you can change the
# 'exec' line here instead
exec /usr/sbin/sshd -D
```

6. The ssh daemon successfully restarted because this command uses the upstart init system, which means that the /etc/rc.d directories are not utilized and the /etc/init.d directory is able to execute the ssh script based on the information from the ssh.conf located in the /etc/init directory.

```
root@ubuntu:~# restart ssh
ssh start/running, process 1112
```

7. Yes, there are other traditional UNIX SysV daemons in runlevel 2 that are displayed since the number 2 is part of the directory name, which the contents include runlevel 2 scripts. The postgresql daemon is started after the apache2 daemon, since each daemon has a sequence number for execution in an orderly fashion. In this case, postgresql is started after apache2 because 19 is greater than 9.

```
root@ubuntu:~# ls /etc/rc2.d
README          S20rsync            S70dns-clean  S99grub-common  S99rc.local
S19postgresql   S20screen-cleanup   S70pppd-dns   S99ondemand
```

8. There is an error message since this command uses the upstart init system, which doesn't utilize the /etc/rc.d directories. So, the postgresql daemon needs to be manipulated after system startup by using `restart` as an argument, thus not using the upstart init system.

```
root@ubuntu:~# restart postgresql
restart: Unknown job: postgresql
```

9. Yes, the postgresql daemon managed to restart successfully.

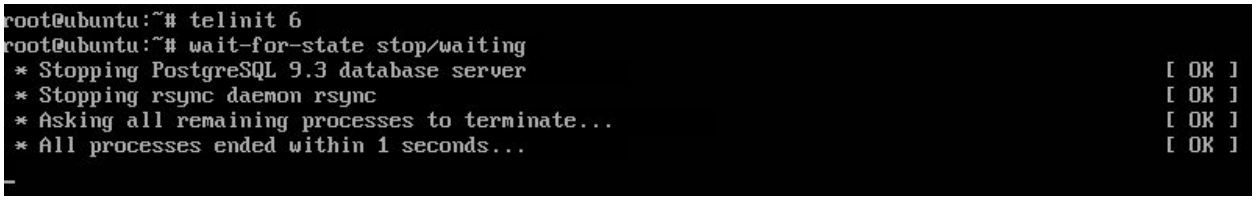
```
root@ubuntu:~# /etc/init.d/postgresql restart
 * Restarting PostgreSQL 9.3 database server                              [ OK ]
```

10. Basically, the postgresql daemon was originally started in runlevels 0 (Halt), 1 (Single User Mode) and 6 (Reboot).

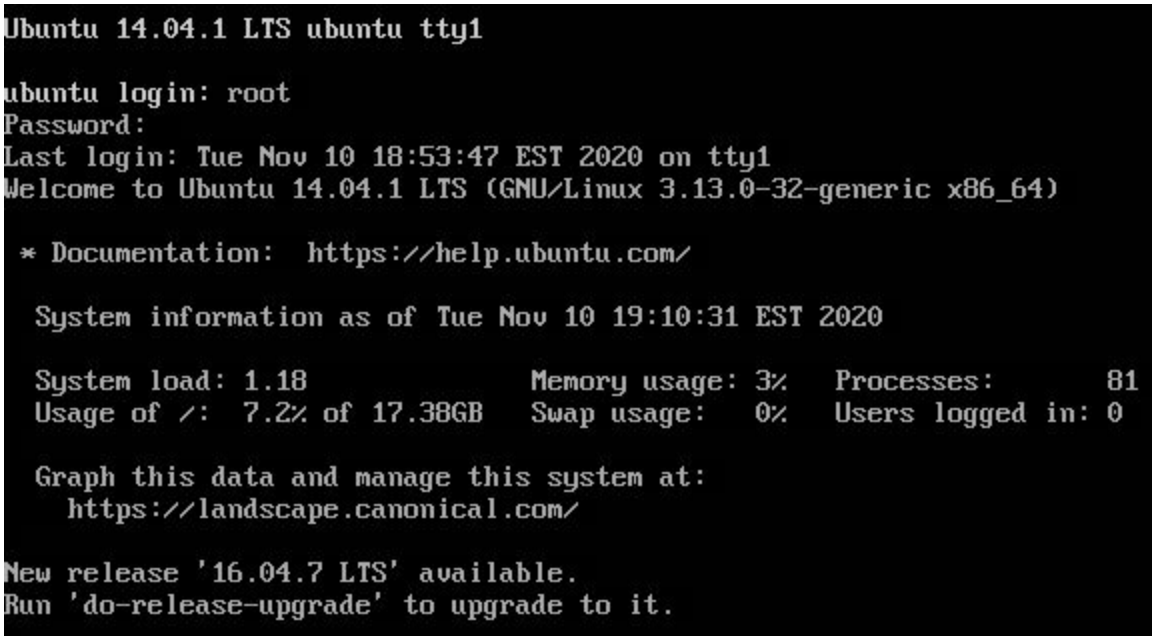
```
root@ubuntu:~# update-rc.d -f postgresql remove
 Removing any system startup links for /etc/init.d/postgresql ...
   /etc/rc0.d/K21postgresql
   /etc/rc1.d/K21postgresql
   /etc/rc2.d/S19postgresql
   /etc/rc3.d/S19postgresql
   /etc/rc4.d/S19postgresql
   /etc/rc5.d/S19postgresql
   /etc/rc6.d/K21postgresql
```

11.

12. Yes, the `init` command could have been used instead of the `telinit` command, since the `init` command is an alias to the `telinit` command.



13.

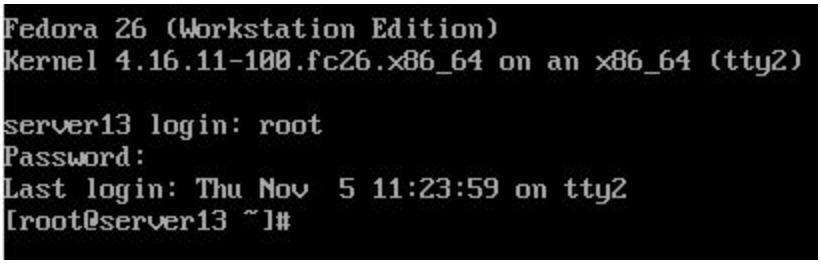


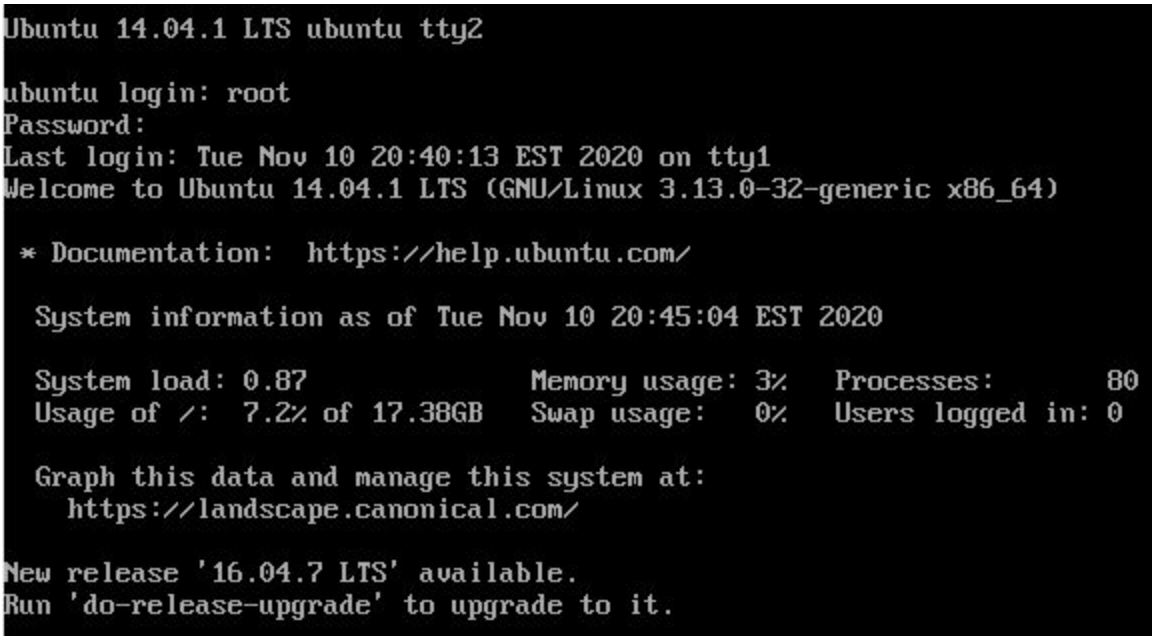
14.

Network Security Tasks:

Validating Files

1.





2.

```
[root@server13 ~]# man md5sum
```

```
MD5SUM(1)                          User Commands                          MD5SUM(1)

NAME
       md5sum - compute and check MD5 message digest

SYNOPSIS
       md5sum [OPTION]... [FILE]...

DESCRIPTION
       Print or check MD5 (128-bit) checksums.

       With no FILE, or when FILE is -, read standard input.

       -b, --binary
              read in binary mode

       -c, --check
              read MD5 sums from the FILEs and check them

       --tag  create a BSD-style checksum

       -t, --text
              read in text mode (default)

              Note: There is no difference between binary and text mode option on GNU system.

   The following five options are useful only when verifying checksums:
       --ignore-missing
              don't fail or report status for missing files

       --quiet
              don't print OK for each successfully verified file

       --status
              don't output anything, status code shows success

 Manual page md5sum(1) line 1 (press h for help or q to quit)
```

```
MD5SUM(1)                          User Commands                          MD5SUM(1)

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              read MD5 sums from the FILEs and check them

       --tag  create a BSD-style checksum

       -t, --text
              read in text mode (default)

              Note: There is no difference between binary and text mode option on GNU system.

   The following five options are useful only when verifying checksums:
       --ignore-missing
              don't fail or report status for missing files

       --quiet
              don't print OK for each successfully verified file

       --status
              don't output anything, status code shows success

[root@server13 ~]# _
```
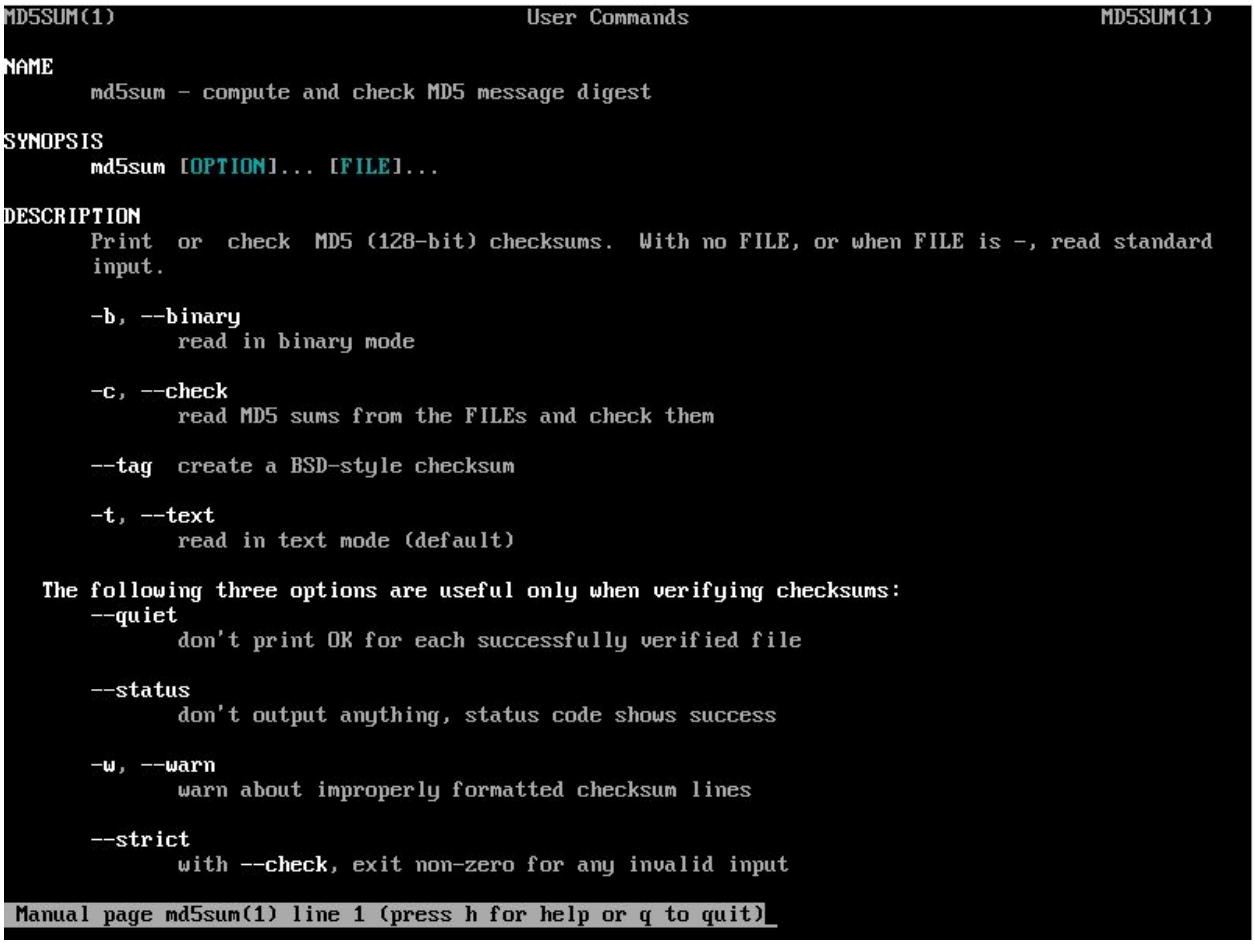

```
root@ubuntu:~# man md5sum_
```


MD5SUM(1) User Commands MD5SUM(1)
NAME
md5sum - compute and check MD5 message digest
SYNOPSIS
md5sum [OPTION]... [FILE]...
DESCRIPTION
Print or check MD5 (128-bit) checksums. With no FILE, or when FILE is -, read standard input.
-b, --binary
read in binary mode
-c, --check
read MD5 sums from the FILEs and check them
--tag create a BSD-style checksum
-t, --text
read in text mode (default)
The following three options are useful only when verifying checksums:
--quiet
don't print OK for each successfully verified file
--status
don't output anything, status code shows success
-w, --warn
warn about improperly formatted checksum lines
--strict
with --check, exit non-zero for any invalid input
Manual page md5sum(1) line 1 (press h for help or q to quit)

```
MD5SUM(1)                          User Commands                          MD5SUM(1)

NAME
       md5sum - compute and check MD5 message digest

SYNOPSIS
       md5sum [OPTION]... [FILE]...

DESCRIPTION
       Print  or  check  MD5 (128-bit) checksums.  With no FILE, or when FILE is -, read standard
       input.

       -b, --binary
              read in binary mode

       -c, --check
              read MD5 sums from the FILEs and check them

       --tag  create a BSD-style checksum

       -t, --text
              read in text mode (default)

   The following three options are useful only when verifying checksums:
       --quiet
              don't print OK for each successfully verified file

       --status
              don't output anything, status code shows success

       -w, --warn
              warn about improperly formatted checksum lines

       --strict
              with --check, exit non-zero for any invalid input

root@ubuntu:~#
```

3.

```
[root@server13 ~]# cp /bin/bash /root
```

```
root@ubuntu:~# cp /bin/bash /root
```

4.

```
[root@server13 ~]# md5sum -b bash
704e0110eca67c37dcc798ad246ae271 *bash
```

```
root@ubuntu:~# md5sum -b bash
b8fc7876e5e69f356837d87de8a1427e *bash
```

5.

```
[root@server13 ~]# md5sum --b bash>bash.md5
[root@server13 ~]# _
```

```
root@ubuntu:~# md5sum --b bash>bash.md5
root@ubuntu:~#
```

6.

```
[root@server13 ~]# md5sum --check bash.md5
bash: OK
```

```
root@ubuntu:~# md5sum --check bash.md5
bash: OK
```

7.

```
[root@server13 ~]# echo "123" >> bash
[root@server13 ~]# _
```

```
root@ubuntu:~# echo "123" >> bash
root@ubuntu:~# _
```

8.

```
[root@server13 ~]# md5sum --check bash.md5
bash: FAILED
md5sum: WARNING: 1 computed checksum did NOT match
```

```
root@ubuntu:~# md5sum --check bash.md5
bash: FAILED
md5sum: WARNING: 1 computed checksum did NOT match
```

9.

```
[root@server13 ~]# rm bash
rm: remove regular file 'bash'? y
[root@server13 ~]#
```

```
root@ubuntu:~# rm bash
root@ubuntu:~#
```

10.

```
[root@server13 ~]# logout
```

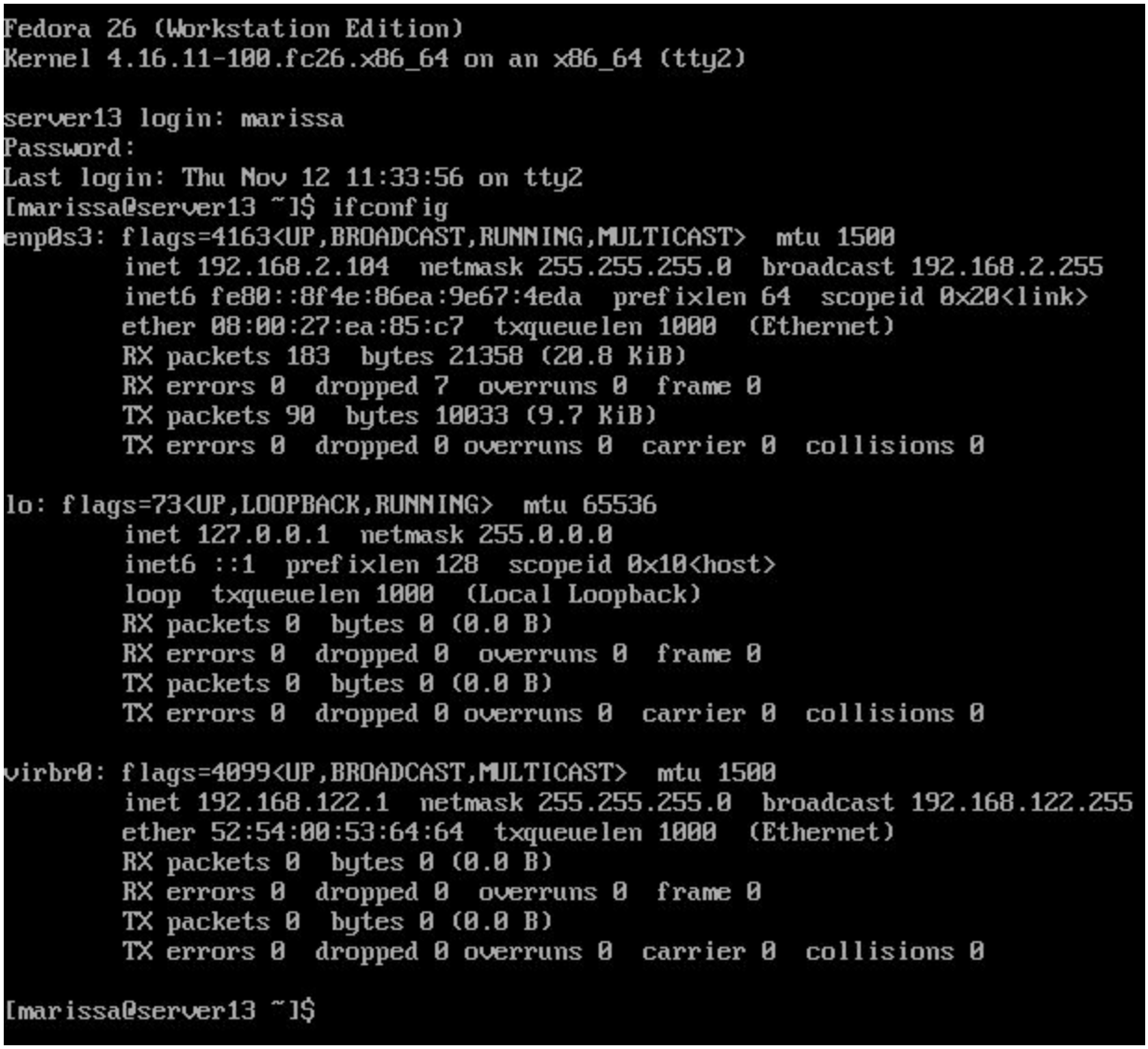
```
Fedora 26 (Workstation Edition)
Kernel 4.16.11-100.fc26.x86_64 on an x86_64 (tty2)

server13 login:
```

```
root@ubuntu:~# logout_
```

```
Ubuntu 14.04.1 LTS ubuntu tty2

ubuntu login:
```

Using SSH

1.


Fedora 26 (Workstation Edition)
Kernel 4.16.11-100.fc26.x86_64 on an x86_64 (tty2)
server13 login: marissa
Password:
Last login: Thu Nov 12 11:33:56 on tty2
[marissa@server13 ~]$ ifconfig
enp0s3: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
inet 192.168.2.104 netmask 255.255.255.0 broadcast 192.168.2.255
inet6 fe80::8f4e:86ea:9e67:4eda prefixlen 64 scopeid 0x20<link>
ether 08:00:27:ea:85:c7 txqueuelen 1000 (Ethernet)
RX packets 183 bytes 21358 (20.8 KiB)
RX errors 0 dropped 7 overruns 0 frame 0
TX packets 90 bytes 10033 (9.7 KiB)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
inet 127.0.0.1 netmask 255.0.0.0
inet6 ::1 prefixlen 128 scopeid 0x10<host>
loop txqueuelen 1000 (Local Loopback)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
virbr0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
inet 192.168.122.1 netmask 255.255.255.0 broadcast 192.168.122.255
ether 52:54:00:53:64:64 txqueuelen 1000 (Ethernet)
RX packets 0 bytes 0 (0.0 B)
RX errors 0 dropped 0 overruns 0 frame 0
TX packets 0 bytes 0 (0.0 B)
TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
[marissa@server13 ~]$

```
Ubuntu 14.04.1 LTS ubuntu tty1

ubuntu login: marissa
Password:
Last login: Thu Nov 12 11:31:31 EST 2020 on tty1
Welcome to Ubuntu 14.04.1 LTS (GNU/Linux 3.13.0-32-generic x86_64)

 * Documentation:  https://help.ubuntu.com/

  System information as of Thu Nov 12 11:31:31 EST 2020

  System load:  0.04              Processes:           78
  Usage of /:   7.2% of 17.38GB   Users logged in:     0
  Memory usage: 4%                IP address for eth0: 192.168.2.103
  Swap usage:   0%

  Graph this data and manage this system at:
    https://landscape.canonical.com/

New release '16.04.7 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

marissa@ubuntu:~$ _
```

```
marissa@ubuntu:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:77:7a:d2
          inet addr:192.168.2.103  Bcast:192.168.2.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe77:7ad2/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:341 errors:0 dropped:13 overruns:0 frame:0
          TX packets:48 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:39995 (39.9 KB)  TX bytes:4346 (4.3 KB)

lo        Link encap:Local Loopback
          inet addr:127.0.0.1  Mask:255.0.0.0
          inet6 addr: ::1/128 Scope:Host
          UP LOOPBACK RUNNING  MTU:65536  Metric:1
          RX packets:90 errors:0 dropped:0 overruns:0 frame:0
          TX packets:90 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:0
          RX bytes:40433 (40.4 KB)  TX bytes:40433 (40.4 KB)
```

```
[marissa@server13 ~]$ ping 192.168.2.103
PING 192.168.2.103 (192.168.2.103) 56(84) bytes of data.
64 bytes from 192.168.2.103: icmp_seq=1 ttl=64 time=1.14 ms
64 bytes from 192.168.2.103: icmp_seq=2 ttl=64 time=0.625 ms
64 bytes from 192.168.2.103: icmp_seq=3 ttl=64 time=0.770 ms
64 bytes from 192.168.2.103: icmp_seq=4 ttl=64 time=0.689 ms
64 bytes from 192.168.2.103: icmp_seq=5 ttl=64 time=0.699 ms
64 bytes from 192.168.2.103: icmp_seq=6 ttl=64 time=0.823 ms
64 bytes from 192.168.2.103: icmp_seq=7 ttl=64 time=0.656 ms
^C
--- 192.168.2.103 ping statistics ---
7 packets transmitted, 7 received, 0% packet loss, time 6010ms
rtt min/avg/max/mdev = 0.625/0.772/1.143/0.164 ms
[marissa@server13 ~]$
```

```
root@ubuntu:~# ping 192.168.2.104
PING 192.168.2.104 (192.168.2.104) 56(84) bytes of data.
64 bytes from 192.168.2.104: icmp_seq=1 ttl=64 time=0.836 ms
64 bytes from 192.168.2.104: icmp_seq=2 ttl=64 time=1.15 ms
64 bytes from 192.168.2.104: icmp_seq=3 ttl=64 time=0.608 ms
64 bytes from 192.168.2.104: icmp_seq=4 ttl=64 time=0.913 ms
64 bytes from 192.168.2.104: icmp_seq=5 ttl=64 time=0.814 ms
64 bytes from 192.168.2.104: icmp_seq=6 ttl=64 time=0.758 ms
^C
--- 192.168.2.104 ping statistics ---
6 packets transmitted, 6 received, 0% packet loss, time 5005ms
rtt min/avg/max/mdev = 0.608/0.847/1.157/0.170 ms
root@ubuntu:~# _
```

```
[marissa@server13 ~]$ /bin/systemctl status sshd.service
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; disabled; vendor preset: disabled)
   Active: inactive (dead)
     Docs: man:sshd(8)
           man:sshd_config(5)
[marissa@server13 ~]$ /bin/systemctl start sshd.service
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ===
Authentication is required to start 'sshd.service'.
Authenticating as: Marissa (marissa)
Password:
==== AUTHENTICATION COMPLETE ===
[marissa@server13 ~]$ /bin/systemctl status sshd.service
● sshd.service - OpenSSH server daemon
   Loaded: loaded (/usr/lib/systemd/system/sshd.service; disabled; vendor preset: disabled)
   Active: active (running) since Thu 2020-11-12 12:18:02 EST; 11s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
 Main PID: 1460 (sshd)
    Tasks: 1 (limit: 4915)
   CGroup: /system.slice/sshd.service
           └─1460 /usr/sbin/sshd -D

Nov 12 12:18:01 server13.domain.com systemd[1]: Starting OpenSSH server daemon...
Nov 12 12:18:02 server13.domain.com sshd[1460]: Server listening on 0.0.0.0 port 22.
Nov 12 12:18:02 server13.domain.com sshd[1460]: Server listening on :: port 22.
Nov 12 12:18:02 server13.domain.com systemd[1]: Started OpenSSH server daemon.
```

```
root@ubuntu:~# apt-get install systemd
Reading package lists... Done
Building dependency tree
Reading state information... Done
systemd is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 215 not upgraded.
```

```
root@ubuntu:~# apt-get install -y ssh
Reading package lists... Done
Building dependency tree
Reading state information... Done
ssh is already the newest version.
0 upgraded, 0 newly installed, 0 to remove and 215 not upgraded.
```

```
root@ubuntu:~# service ssh status
ssh start/running, process 865
```

2.

```
[marissa@server13 ~]$ cat /etc/passwd | grep marissa
marissa:x:1000:1000:Marissa:/home/marissa:/bin/bash
```

```
root@ubuntu:~# cat /etc/passwd | grep marissa
marissa:x:1000:1000:Marissa,,,:/home/marissa:/bin/bash
```

```
root@ubuntu:~# ssh marissa@192.168.2.104
The authenticity of host '192.168.2.104 (192.168.2.104)' can't be established.
ECDSA key fingerprint is 59:5e:60:e6:c1:dd:72:73:9b:1b:c6:b1:c6:55:fd:5a.
Are you sure you want to continue connecting (yes/no)? _
```

3.

```
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.2.104' (ECDSA) to the list of known hosts.
Connection closed by 192.168.2.104
root@ubuntu:~# _
```

4.

```
root@ubuntu:~# ssh marissa@192.168.2.104
marissa@192.168.2.104's password:
Last login: Thu Nov 12 13:13:03 2020 from 192.168.2.104
[marissa@server13 ~]$ cat /etc/fedora-release
Fedora release 26 (Twenty Six)
[marissa@server13 ~]$ whoami
marissa
[marissa@server13 ~]$ pwd
/home/marissa
[marissa@server13 ~]$ ls -l
total 44
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Desktop
drwxr-xr-x. 3 marissa marissa 4096 Sep 18 09:09 Documents
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Downloads
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Music
drwxrwxr-x. 4 marissa marissa 4096 Oct  1 12:38 mysamples2
-rw-rw-r--. 1 marissa marissa    0 Oct  1 13:37 newfile
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Pictures
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Public
drwxrwxr-x. 4 marissa marissa 4096 Oct  1 13:04 samples
-r-Sr-Sr--. 1 marissa marissa    0 Oct  8 08:27 specialfile
-rwxrwxr-x. 1 marissa marissa  440 Nov  5 14:49 tasks
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Templates
drwxr-xr-x. 2 marissa marissa 4096 Sep 17 21:18 Videos
[marissa@server13 ~]$
```

5.

```
[marissa@server13 ~]$ exit
logout
Connection to 192.168.2.104 closed.
root@ubuntu:~#
```

6.

```
root@ubuntu:~# cd .ssh
root@ubuntu:~/.ssh# ls -l
total 4
-rw-r--r-- 1 root root 222 Nov 12 13:11 known_hosts
```

7.

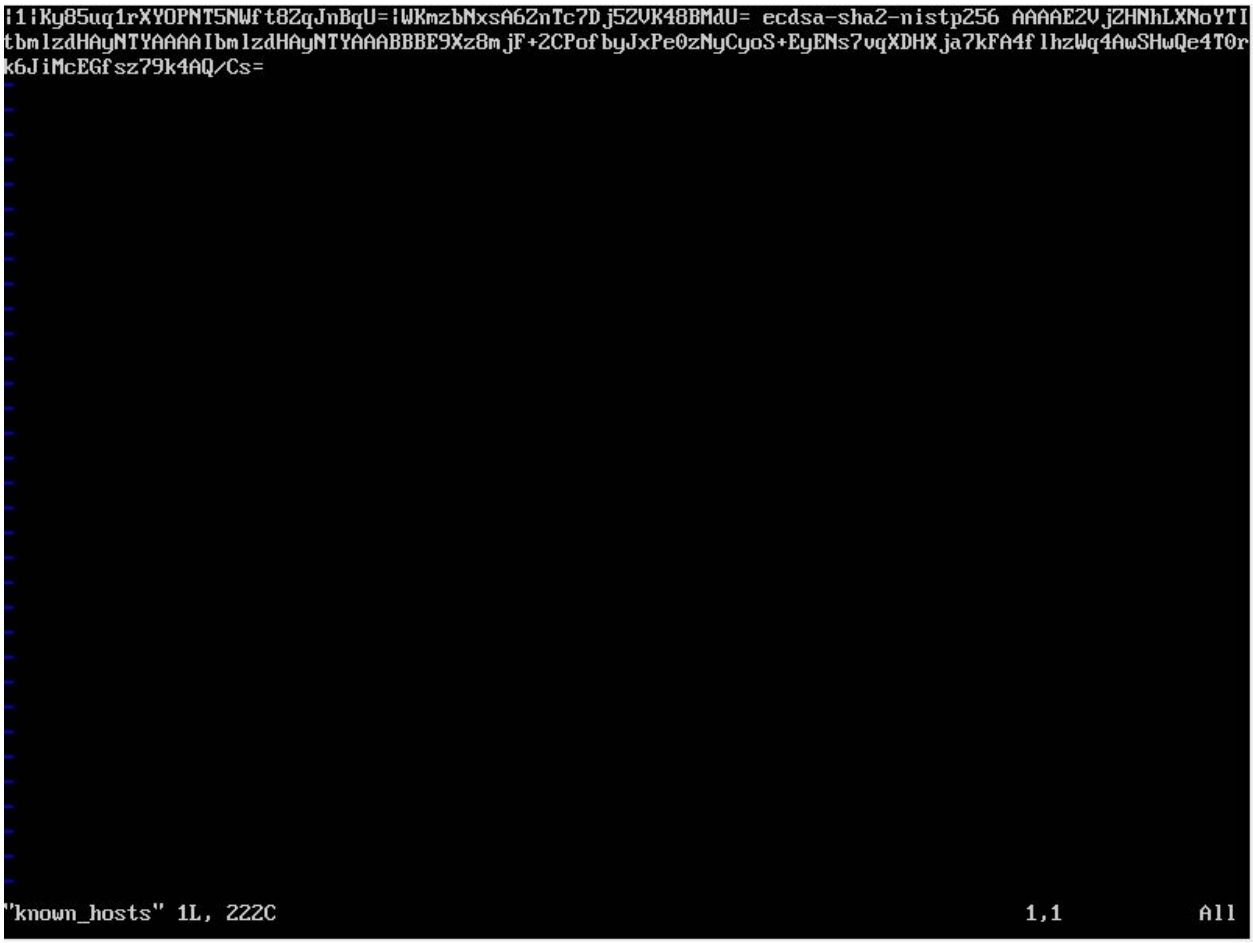
```
root@ubuntu:~/.ssh# cat known_hosts
|1|Ky85uq1rXYOPNT5NWft8ZqJnBqU=|WKmzbNxsA6ZnTc7Dj5ZVK48BMdU= ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTI
tbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBE9Xz8mjF+2CPofbyJxPe0zNyCyoS+EyENs7vqXDHXja7kFA4flhzWq4AwSHwQe4T0r
k6JiMcEGfsz79k4AQ/Cs=
```

8.

```
[marissa@server13 ~]$ ssh marissa@192.168.2.104
The authenticity of host '192.168.2.104 (192.168.2.104)' can't be established.
ECDSA key fingerprint is SHA256:BmWkOkeEXni9BgqfyG7PqEJ6KkM7Ien0dtB2Gc4dXi8.
ECDSA key fingerprint is MD5:59:5e:60:e6:c1:dd:72:73:9b:1b:c6:b1:c6:55:fd:5a.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.2.104' (ECDSA) to the list of known hosts.
marissa@192.168.2.104's password:
Last login: Thu Nov 12 13:37:53 2020 from 192.168.2.103
[marissa@server13 ~]$ exit
logout
Connection to 192.168.2.104 closed.
[marissa@server13 ~]$ cd .ssh
[marissa@server13 .ssh]$ ls -l
total 4
-rw-r--r--. 1 marissa marissa 175 Nov 12 13:43 known_hosts
[marissa@server13 .ssh]$ cat known_hosts
192.168.2.104 ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTItbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBE9Xz8mjF+2CPo
fbyJxPe0zNyCyoS+EyENs7vqXDHXja7kFA4flhzWq4AwSHwQe4T0rk6JiMcEGfsz79k4AQ/Cs=
[marissa@server13 .ssh]$
```

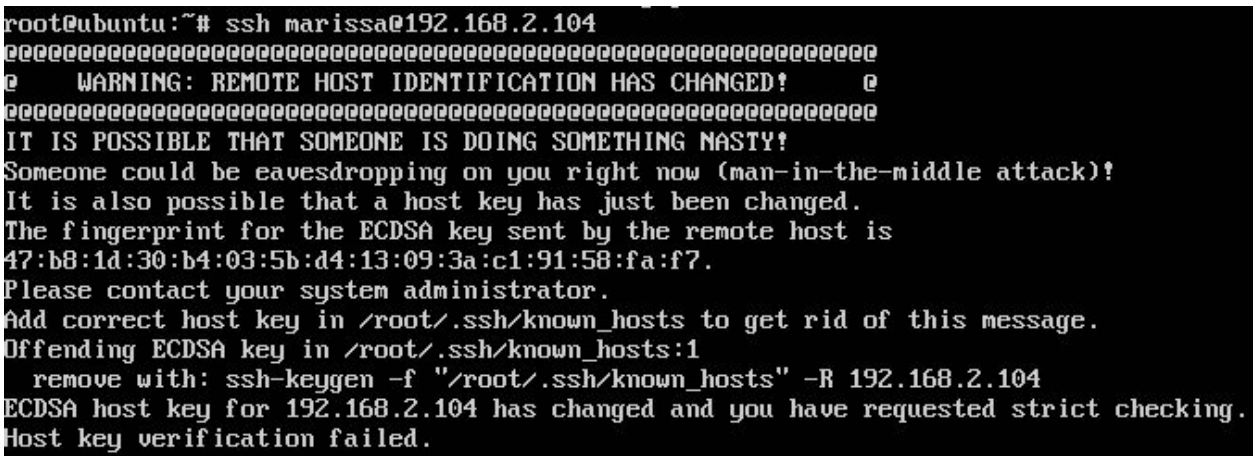
9.

```
root@ubuntu:~/.ssh# vi known_hosts
```


|1|Ky85uq1rXYOPNT5NWft82qJnBqU=|WKmzbNxsA62nTc7Dj52VK48BMdU= ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTI
tbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBE9Xz8mjF+2CPofbyJxPe0zNyCyoS+EyENs7vqXDHXja7kFA4flhzWq4AwSHwQe4T0r
k6JiMcEGfsz79k4AQ/Cs=
"known_hosts" 1L, 222C
1,1
All


|1|i62y5yO6eP9Gs5XqGQHv6iFKIMg=|Fw+JFcETGSHRDMwFpGwGJbdb2Wg =cdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTIt
bmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBFo88CCXDDjLYHnMcQrMLuvnuS/rTqdOtBNQavXcISVSzgR4IT0Emy0+DaMh3ENLSptT
ANJA774xgWKOPfZyuDs=
:wq

10.


root@ubuntu:~# ssh marissa@192.168.2.104
@@@
@ WARNING: REMOTE HOST IDENTIFICATION HAS CHANGED! @
@@@
IT IS POSSIBLE THAT SOMEONE IS DOING SOMETHING NASTY!
Someone could be eavesdropping on you right now (man-in-the-middle attack)!
It is also possible that a host key has just been changed.
The fingerprint for the ECDSA key sent by the remote host is
47:b8:1d:30:b4:03:5b:d4:13:09:3a:c1:91:58:fa:f7.
Please contact your system administrator.
Add correct host key in /root/.ssh/known_hosts to get rid of this message.
Offending ECDSA key in /root/.ssh/known_hosts:1
remove with: ssh-keygen -f "/root/.ssh/known_hosts" -R 192.168.2.104
ECDSA host key for 192.168.2.104 has changed and you have requested strict checking.
Host key verification failed.

11.

```
root@ubuntu:~/.ssh# vi known_hosts_
```


```
root@ubuntu:~/.ssh# ssh marissa@192.168.2.104
The authenticity of host '192.168.2.104 (192.168.2.104)' can't be established.
ECDSA key fingerprint is 47:b8:1d:30:b4:03:5b:d4:13:09:3a:c1:91:58:fa:f7.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '192.168.2.104' (ECDSA) to the list of known hosts.
marissa@192.168.2.104's password:
Last login: Thu Nov 12 14:27:03 2020 from 192.168.2.103
[marissa@server13 ~]$ exit
logout
Connection to 192.168.2.104 closed.
root@ubuntu:~/.ssh# cat known_hosts
|1|8Vo2CwZ08DTr7VnHlyI8sOlciJM=|KR5Uicrb7/YQP60xQFJiwUkZTrs= ecdsa-sha2-nistp256 AAAAE2VjZHNhLXNoYTI
tbmlzdHAyNTYAAAAIbmlzdHAyNTYAAABBBFo88CCXDDjLYHnMcQrMLuvnuS/rTqdOtBNQavXcISVSzgR4IT0Emy0+DaMh3ENLSpt
TANJA774xgWKOPfZyuDs=
```

12.

```
marissa@ubuntu:~$ su
Password:
root@ubuntu:/home/marissa# cd
root@ubuntu:~# cd .ssh
root@ubuntu:~/.ssh# cp known_hosts /etc/ssh/ssh_known_hosts
root@ubuntu:~/.ssh# exit
exit
```

```
marissa@ubuntu:~$ su
Password:
root@ubuntu:/home/marissa# cd
root@ubuntu:~# rm ~/.ssh/known_hosts
root@ubuntu:~# _
```

13.

```
root@ubuntu:~# ssh marissa@192.168.2.104
marissa@192.168.2.104's password:
Last login: Thu Nov 12 14:30:15 2020 from 192.168.2.103
[marissa@server13 ~]$ exit
logout
Connection to 192.168.2.104 closed.
root@ubuntu:~# _
```

14.

```
root@ubuntu:~# exit
exit
marissa@ubuntu:~$ exit_
```

```
Ubuntu 14.04.1 LTS ubuntu tty1

ubuntu login:
```