```
Last login: Tue Feb 19 09:55:21 on console
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/emmanuel.pem ubuntu@172.17.64.234
The authenticity of host '172.17.64.234 (172.17.64.234)' can't be established.
ECDSA key fingerprint is SHA256:TYooLgORRQohqewy2JqbjIOdtmPZTrA5ADIMpRuHdPQ.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.17.64.234' (ECDSA) to the list of known hosts.
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@         WARNING: UNPROTECTED PRIVATE KEY FILE!         @
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
Permissions 0644 for 'Desktop/emmanuel.pem' are too open.
It is required that your private key files are NOT accessible by others.
This private key will be ignored.
Load key "Desktop/emmanuel.pem": bad permissions
ubuntu@172.17.64.234: Permission denied (publickey).
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ chmod 600 Desktop/emmanuel.pem
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/emmanuel.pem ubuntu@172.17.64.250
^C
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/emmanuel.pem ubuntu@172.17.64.234
Load key "Desktop/emmanuel.pem": invalid format
ubuntu@172.17.64.234: Permission denied (publickey).
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
-bash: Desktop/University of Tartu/Basics of Cloud Computing/Lab1/emmanuel.pem: Permission denied
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
Welcome to Ubuntu 18.04 LTS (GNU/Linux 4.15.0-22-generic x86_64)

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

  System information as of Wed Feb 20 12:50:21 UTC 2019

  System load:  0.08              Processes:            81
  Usage of /:   9.9% of 9.52GB    Users logged in:       0
  Memory usage: 11%               IP address for ens3: 192.168.64.22
  Swap usage:   0%

 * 'snap info' now shows the freshness of each channel.
   Try 'snap info microk8s' for all the latest goodness.


  Get cloud support with Ubuntu Advantage Cloud Guest:
    http://www.ubuntu.com/business/services/cloud

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



The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@emmanuellab2:~$ sudo passwd ubuntu
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
ubuntu@emmanuellab2:~$ Connection to 172.17.64.234 closed by remote host.
Connection to 172.17.64.234 closed.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget
wget: missing URL
Usage: wget [OPTION]... [URL]...

Try `wget --help' for more options.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh wget
ssh: Could not resolve hostname wget: nodename nor servname provided, or not known
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i wget
Warning: Identity file wget not accessible: No such file or directory.
usage: ssh [-46AaCfGgKkMNnqsTtVvXxYy] [-B bind_interface]
           [-b bind_address] [-c cipher_spec] [-D [bind_address:]port]
           [-E log_file] [-e escape_char] [-F configfile] [-I pkcs11]
           [-i identity_file] [-J [user@]host[:port]] [-L address]
           [-l login_name] [-m mac_spec] [-O ctl_cmd] [-o option] [-p port]
           [-Q query_option] [-R address] [-S ctl_path] [-W host:port]
           [-w local_tun[:remote_tun]] destination [command]
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget localhost
--2019-02-20 14:58:33--  http://localhost/
Resolving localhost... ::1, 127.0.0.1
Connecting to localhost|::1|:80... failed: Connection refused.
Connecting to localhost|127.0.0.1|:80... failed: Connection refused.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ less index.html
index.html: No such file or directory
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget
wget: missing URL
Usage: wget [OPTION]... [URL]...

Try `wget --help' for more options.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget indec.html
--2019-02-20 15:00:59--  http://indec.html/
Resolving indec.html... failed: nodename nor servname provided, or not known.
wget: unable to resolve host address 'indec.html'
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget index.html
--2019-02-20 15:01:07--  http://index.html/
Resolving index.html... failed: nodename nor servname provided, or not known.
wget: unable to resolve host address 'index.html'
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ls
A-BProblem.zip            CSCI 221 Assignment 3.zip    Class6.zip           Downloads                 Music                 ValidOrInvalid.zip
Applications              Class1.zip                   Class7.zip           Google Drive File Stream  Parallels             VirtualBox VMs
Applications (Parallels)  Class10.zip                  Class8.zip           ImageProcessing.java      Pictures              eclipse-workspace
Assignment1.zip           Class2.zip                   Class9.zip           Justinmind                Public                get-pip.py
Assignment1Example.zip    Class3.zip                   Creative Cloud Files LastClass.zip             Sites                 homebrew
Assignment2Emmanuel.zip   Class4.zip                   Desktop              Library                   Test2 Example.zip     src
Assignment3.zip           Class5.zip                   Documents            Movies                    Topsoil               untitled104.iml
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget
wget: missing URL
Usage: wget [OPTION]... [URL]...

Try `wget --help' for more options.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget index.html
--2019-02-20 15:03:10--  http://index.html/
Resolving index.html... failed: nodename nor servname provided, or not known.
wget: unable to resolve host address 'index.html'
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ wget localhost
--2019-02-20 15:03:19--  http://localhost/
Resolving localhost... ::1, 127.0.0.1
Connecting to localhost|::1|:80... failed: Connection refused.
Connecting to localhost|127.0.0.1|:80... failed: Connection refused.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ sudo nano /var/www/html/index.html
Password:
Sorry, try again.
Password:
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ sudo nano /var/www/html/index.html
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    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
SHA256:j24DW4Iry0gEAeAniKd2iKWVygU/p7m+nzwsmHiG9hs.
Please contact your system administrator.
Add correct host key in /Users/shefaliemmanuel 1/.ssh/known_hosts to get rid of this message.
Offending ECDSA key in /Users/shefaliemmanuel 1/.ssh/known_hosts:4
ECDSA host key for 172.17.64.234 has changed and you have requested strict checking.
Host key verification failed.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ rm .ssh/known_hosts
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
The authenticity of host '172.17.64.234 (172.17.64.234)' can't be established.
ECDSA key fingerprint is SHA256:j24DW4Iry0gEAeAniKd2iKWVygU/p7m+nzwsmHiG9hs.
Are you sure you want to continue connecting (yes/no)? y
Please type 'yes' or 'no': yes
Warning: Permanently added '172.17.64.234' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04 LTS (GNU/Linux 4.15.0-22-generic x86_64)

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

   System information as of Wed Feb 20 13:23:17 UTC 2019

   System load:  0.0               Processes:            85
   Usage of /:   12.2% of 9.52GB   Users logged in:      0
   Memory usage: 12%               IP address for ens3: 192.168.64.37
   Swap usage:   0%

 * 'snap info' now shows the freshness of each channel.
    Try 'snap info microk8s' for all the latest goodness.


   Get cloud support with Ubuntu Advantage Cloud Guest:
     http://www.ubuntu.com/business/services/cloud

198 packages can be updated.
95 updates are security updates.


Last login: Wed Feb 20 12:52:55 2019
ubuntu@shefaliemmanuelv2:~$ sudo apt update
Hit:1 http://security.ubuntu.com/ubuntu bionic-security InRelease
Hit:2 http://nova.clouds.archive.ubuntu.com/ubuntu bionic InRelease
Hit:3 http://nova.clouds.archive.ubuntu.com/ubuntu bionic-updates InRelease
Hit:4 http://nova.clouds.archive.ubuntu.com/ubuntu bionic-backports InRelease
Reading package lists... 42%
Reading package lists... Done
Building dependency tree
Reading state information... Done
192 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@shefaliemmanuelv2:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree
Reading state information... Done
apache2 is already the newest version (2.4.29-1ubuntu4.5).
The following package was automatically installed and is no longer required:
  grub-pc-bin
Use 'sudo apt autoremove' to remove it.
0 upgraded, 0 newly installed, 0 to remove and 192 not upgraded.
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$ sudo nano /var/www/html/index.html
ubuntu@shefaliemmanuelv2:~$  cat /home/ubuntu/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDCCX71nc5A19FPR7oAF9zrIDktkfXzxugY3VRiPsOlMY18i5xPgVXWY7161Afv9lNPRl3y8EFxpRJsc83VGWGQOKVfZ5pHds5MK5ouBOGZuDsZvDE/xVSQ+138shwbu/2IGlOEjZHWSY1xC14AunVDU5tbpkkTeeU
VekHVnIjfN65uhNUT16UufvxSFc+l1GK80bR7l35FmkAJg6zPoZsn7BC5bBcgqvOtthfJICHZEJtpJwtAYLJX+Ke8FMMSxXtSFuGMFh7YRq+1LxQLQMDP6oqk75GMJSMyXYcKJSGssh8bqvY5O4xt441a2InbWIdFpD57LAMg/TIvybpwIXQT Generated-by-Nova
ubuntu@shefaliemmanuelv2:~$  cat /home/ubuntu/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDCCX71nc5A19FPR7oAF9zrIDktkfXzxugY3VRiPsOlMY18i5xPgVXWY7161Afv9lNPRl3y8EFxpRJsc83VGWGQOKVfZ5pHds5MK5ouBOGZuDsZvDE/xVSQ+138shwbu/2IGlOEjZHWSY1xC14AunVDU5tbpkkTeeU
VekHVnIjfN65uhNUT16UufvxSFc+l1GK80bR7l35FmkAJg6zPoZsn7BC5bBcgqvOtthfJICHZEJtpJwtAYLJX+Ke8FMMSxXtSFuGMFh7YRq+1LxQLQMDP6oqk75GMJSMyXYcKJSGssh8bqvY5O4xt441a2InbWIdFpD57LAMg/TIvybpwIXQT Generated-by-Nova
ubuntu@shefaliemmanuelv2:~$  cat /home/ubuntu/.ssh/authorized_keys | WC -L
WC: command not found
ubuntu@shefaliemmanuelv2:~$  cat /home/ubuntu/.ssh/authorized_keys | wc -l
1
ubuntu@shefaliemmanuelv2:~$  cat /home/ubuntu/.ssh/authorized_keys
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDCCX71nc5A19FPR7oAF9zrIDktkfXzxugY3VRiPsOlMY18i5xPgVXWY7161Afv9lNPRl3y8EFxpRJsc83VGWGQOKVfZ5pHds5MK5ouBOGZuDsZvDE/xVSQ+138shwbu/2IGlOEjZHWSY1xC14AunVDU5tbpkkTeeU
VekHVnIjfN65uhNUT16UufvxSFc+l1GK80bR7l35FmkAJg6zPoZsn7BC5bBcgqvOtthfJICHZEJtpJwtAYLJX+Ke8FMMSxXtSFuGMFh7YRq+1LxQLQMDP6oqk75GMJSMyXYcKJSGssh8bqvY5O4xt441a2InbWIdFpD57LAMg/TIvybpwIXQT Generated-by-Nova
ubuntu@shefaliemmanuelv2:~$ packet_write_wait: Connection to 172.17.64.234 port 22: Broken pipe
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ cat /home/ubuntu/.ssh/authorized_keys
cat: /home/ubuntu/.ssh/authorized_keys: No such file or directory
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ cat /home/ubuntu/.ssh/authorized_keys
cat: /home/ubuntu/.ssh/authorized_keys: No such file or directory
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@@
@    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
SHA256:EsfvhZ/aW0PYc+nqxWd0WBVJ2FfxzRbQpIz5o22bCc4.
Please contact your system administrator.
Add correct host key in /Users/shefaliemmanuel 1/.ssh/known_hosts to get rid of this message.
Offending ECDSA key in /Users/shefaliemmanuel 1/.ssh/known_hosts:1
ECDSA host key for 172.17.64.234 has changed and you have requested strict checking.
Host key verification failed.
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ rm .ssh/known_hosts
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$ ssh -i Desktop/University\ of\ Tartu/Basics\ of\ Cloud\ Computing/Lab1/emmanuel.pem ubuntu@172.17.64.234
The authenticity of host '172.17.64.234 (172.17.64.234)' can't be established.
ECDSA key fingerprint is SHA256:EsfvhZ/aW0PYc+nqxWd0WBVJ2FfxzRbQpIz5o22bCc4.
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added '172.17.64.234' (ECDSA) to the list of known hosts.
Welcome to Ubuntu 18.04 LTS (GNU/Linux 4.15.0-22-generic x86_64)

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

   System information as of Wed Feb 20 13:53:45 UTC 2019

   System load:  0.05              Processes:            84
   Usage of /:   12.2% of 9.52GB   Users logged in:      0
   Memory usage: 12%               IP address for ens3: 192.168.64.17
   Swap usage:   0%

 * 'snap info' now shows the freshness of each channel.
    Try 'snap info microk8s' for all the latest goodness.


   Get cloud support with Ubuntu Advantage Cloud Guest:
     http://www.ubuntu.com/business/services/cloud

198 packages can be updated.
95 updates are security updates.


Last login: Wed Feb 20 12:52:55 2019
ubuntu@shefalis-instance-from-a-snapshot:~$ cat /home/ubuntu/.ssh/authorized_keys
```

ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQDCCX71nc5Al9FPR7oAF9zrIDktkfXzxugY3VRiPsOlMY18i5xPgVXWY7161Afv9lNPRl3y8EFxpRJsc83VGWGQOKVfZ5pHds5MK5ouBOGZuDsZvDE/xVSQ+138shwbu/2IGlOEjZHWSY1xC14AunVDU5tbpkkTeeU
VekHVnIjfN65uhNUTl6UufvxSFc+l1GK80bR7l35FmkAJg6zPoZsn7BC5bBcgqvOtthfJICHZEJtpJwtAYLJX+Ke8FMMSxXtSFuGMFh7YRq+1LxQLQMDP6oqk75GMJSMyXYcKJSGssh8bqvY5O4xt441a2InbWIdFpD57LAMg/TIvybpwIXQT Generated-by-Nova
ssh-rsa AAAAB3NzaC1yc2EAAAADAQABAAABAQCeitzz9d5p8AIk3bq/f8PcKD9CDMdD/Fgy+dRST+ggVevfWN9R0UQSo6KzAtgyGGpz3KOw9dZO1mzAmDGvvjMeEISwz+v+1KkupFePrcDYemJHxw00LCoIuL+9lnvAaS6RPyjzmZUD+DevTigez23ht8ueISmbuBp
fDyfiKPkZHmbVFknRBn3/C0jjROT/bqeLQIDhJDreZOmLriAD2hNIrXBxnB85VDzXvBbpPyQk9Traq60bD2ltQ0e29wwDGHfEWfd3NpyxEmxzVmkAOTfZS7m33gaZPugaIgSwQ4+geg+xnTfs+F6vy+1WqEvyrc1Bw1PRQjNSOmDsjmGB+Wid Generated-by-Nova
ubuntu@shefalis-instance-from-a-snapshot:~$ cat /home/ubuntu/.ssh/authorized_keys | wc -l
2
ubuntu@shefalis-instance-from-a-snapshot:~$ packet_write_wait: Connection to 172.17.64.234 port 22: Broken pipe
Shefali-Emmanuels-MacBook-Pro-2018:~ shefaliemmanuel$