

Note :All the commands have been tested on ubuntu 16.04 platform.

1. Write all the commands that you would run to assign the following to a linux machine :

- a. static IP -192.168.1.119
- b. subnet mask - 255.255.253.0
- c. gateway - 192.168.1.1
- d. nameserver - 192.168.1.1

Note: These changes should be sustained. These settings should not change on reboot.

Answer-----

- **sudo vi /etc/network/interfaces** // open interfaces file in vi editor

#press 'i' for entering in edit mode

auto lo

iface lo inet loopback

auto eno1

iface eno1 inet **static** // here static ip address for the server instead of dhcp

address 192.168.1.119 //static ip address

netmask 255.255.255.253.0

gateway 192.168.1.1

dns-nameservers 192.168.1.1

press shift+Z+Z → for save and exit in vi editor

For name server--

- **sudo vi /etc/resolv.conf** // open resolv.conf file for nameserver

nameserver 192.168.1.1

press shift+Z+Z - for save and exit in vi editor

- **sudo apt-get remove dhcp-client** // if dhcp install we have to remove it

For verify----->

- **sudo ifup eno1**
- **Ifconfig or ip link**

2. Create a file saying "Hello! Welcome to AutoNinja" with a filename hello.log on your local system and transfer it to a cloud server with IP - **139.59.45.169** and username - root in a folder /usr/local/ninja.

Answer---

- **echo "Hello! Welcome to AutoNinja" >> hello.log** //creating a file
- **scp hello.log root@139.59.45.169:/usr/local/ninja**

```
lucky@autoninja: ~  
lucky@autoninja:~$ scp hello.log root@139.59.45.169:/usr/local/ninja  
hello.log 100% 117 0.1KB/s 00:00  
lucky@autoninja:~$
```

3. Login to the same server above using ssh and change the timezone from UTC to IST.
Answer----

- **ssh root@139.59.45.169**

```
root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01: ~  
lucky@autoninja:~$ ssh root@139.59.45.169  
Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.4.0-109-generic x86_64)  
  
* Documentation:  https://help.ubuntu.com  
* Management:    https://landscape.canonical.com  
* Support:        https://ubuntu.com/advantage  
  
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.  
  
*** System restart required ***  
Last login: Mon Jan 22 16:05:23 2018 from 14.139.122.139  
root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01:~#
```

- **dpkg-reconfigure tzdata**

```
root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01: ~  
Package configuration  
  
Configuring tzdata  
Please select the geographic area in which you live. Subsequent  
configuration questions will narrow this down by presenting a list of  
cities, representing the time zones in which they are located.  
  
Geographic area:  
  
Africa  
America  
Antarctica  
Australia  
Arctic Ocean  
Asia  
Atlantic Ocean  
Europe  
  
<Ok> <Cancel>
```

```
root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01: ~
lucky@autoninja:~$ ssh root@139.59.45.169
Welcome to Ubuntu 16.04.3 LTS (GNU/Linux 4.4.0-109-generic x86_64)

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

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.

*** System restart required ***
Last login: Mon Jan 22 16:05:23 2018 from 14.139.122.139
root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01:~# dpkg-reconfigure tzdata

Current default time zone: 'Asia/Kolkata'
Local time is now:      Mon Jan 22 17:35:19 IST 2018.
Universal Time is now:  Mon Jan 22 12:05:19 UTC 2018.

root@ubuntu-s-1vcpu-1gb-blr1-bhoopendra01:~# █
```

4. rsync a folder /usr/local/ninja to /usr/local/ninja_rsync and make sure the rsync command is running as a daemon, i.e, it should be running in background and should automatically start if its killed (manually or accidentally). Also, any modifications/additions to ninja folder should instantly sync to ninja_rsync folder.

Answer---

```
sudo su // super user mode
cd /usr/local //changing directory to /usr/local
mkdir ninja //Creating a directory name ninja
sudo echo "hello !" >> file1 // creating a file
touch file2 // creating a file
touch file3 //creating a file
cd ./ //changing directory to /usr/local
mkdir ninja_rsync //Creating a directory name ninja_rsync
```

crontab -e // crontab for running a periodic backup process

*** * * * * rsync -avh -delete /usr/local/ninja/ /usr/local/ninja_rsync &**

"*" -----> it take all values within given range i.e, minute 0-59"

& ----->for running as daemon

Note----> As *cron* is a *demon* service so we can skip '&'.

5. Setup docker on the above server using

<https://github.com/docker-library/php/blob/a37af189869968236a8b832beac950b78b26b471/5.6/jessie/apache/Dockerfile> dockerfile and serve the attached php file from within the docker container to port 80 on the server.

Answer-----

First we have to install Docker using the below command:

sudo apt-get install docker.io

Now follow the below steps:

- Create a folder named Docker
- Create a sub-directory named src inside this folder
- Create index.php file inside the src folder with something that you would like to display on the page -

```
<?php
echo "welcome to autoninja !!";
```

- Inside the directory Docker, create a file named **Dockerfile**. Paste the following content inside this file -

```
FROM php:5.6-apache      //docker download php from docker hub
COPY src/ /var/www/html/ //copy source to inside image
EXPOSE 80                //it will tell running container to listen to port 80
```

- Now type the following commands :

```
docker build -t hello-world .
```

```
# first time you execute this command it will download php image.
```

```
docker run -p 80:80 -d hello-world
```

Here, the **-d** flag will detach the command line from the container and print the container ID.

To check logs, run the following command -

```
docker logs <container ID>
```

To kill the container, run the following command -

```
docker kill <container ID>
```

