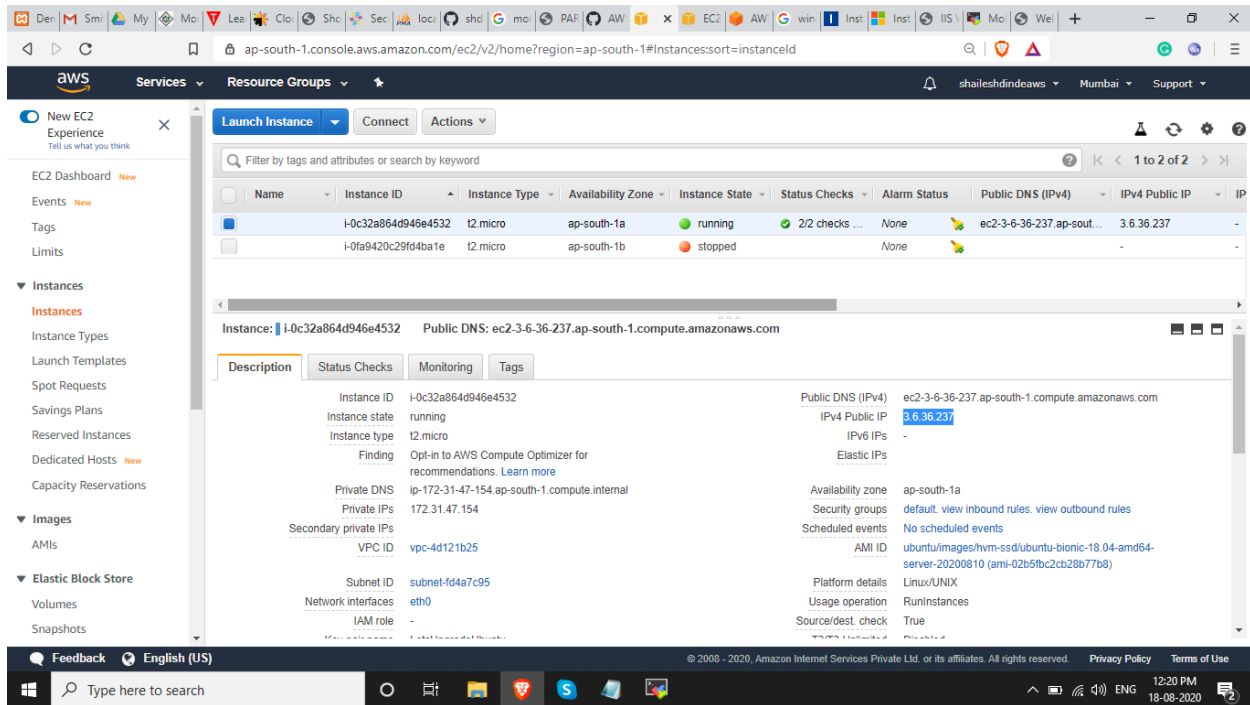


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- Assignment/Project Day 3 16<sup>th</sup> August 2020

## Project 2

### Deploying a web server in Ubuntu instance.

#### 1. Task 1 : Create Ubuntu instance using AMI



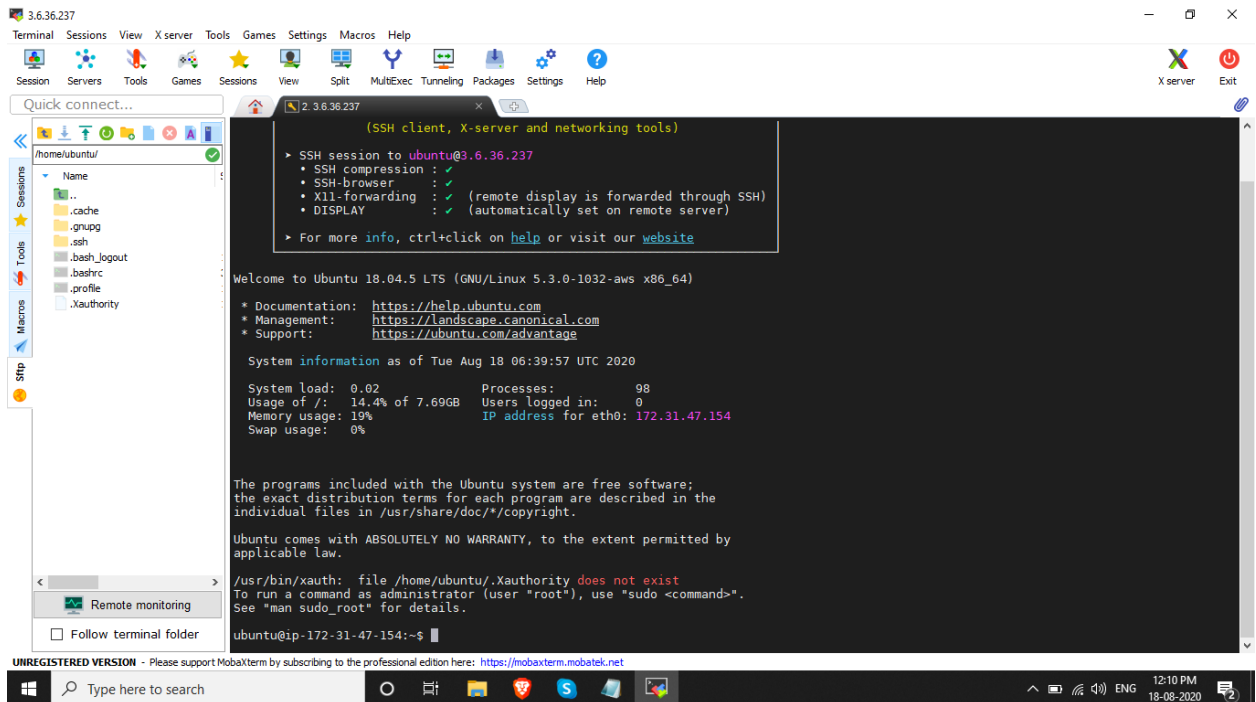
The screenshot displays the AWS Management Console interface for the 'ap-south-1' region. The left sidebar shows navigation options like 'New EC2 Experience', 'Events', 'Tags', 'Limits', 'Instances', 'Instance Types', 'Launch Templates', 'Spot Requests', 'Savings Plans', 'Reserved Instances', 'Dedicated Hosts', 'Capacity Reservations', 'Images', 'AMIs', and 'Elastic Block Store'. The main content area shows a list of instances with columns for Name, Instance ID, Instance Type, Availability Zone, Instance State, Status Checks, Alarm Status, Public DNS (IPv4), and IPv4 Public IP. Two instances are listed: one running (i-0c32a864d946e4532) and one stopped (i-0fa9420c29f04ba1e). Below the list, the details for the running instance 'i-0c32a864d946e4532' are shown, including its Public DNS (ec2-3-6-36-237.ap-south-1.compute.amazonaws.com), Private DNS (ip-172-31-47-154.ap-south-1.compute.internal), VPC ID (vpc-4d121b25), Subnet ID (subnet-fd4a7c95), Network interfaces (eth0), and IAM role (-).

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP
	i-0c32a864d946e4532	t2.micro	ap-south-1a	running	2/2 checks ...	None	ec2-3-6-36-237.ap-south-1.compute.amazonaws.com	3.6.36.237
	i-0fa9420c29f04ba1e	t2.micro	ap-south-1b	stopped		None		

Instance: i-0c32a864d946e4532 Public DNS: ec2-3-6-36-237.ap-south-1.compute.amazonaws.com

Property	Value
Instance ID	i-0c32a864d946e4532
Instance state	running
Instance type	t2.micro
Finding	Opt-in to AWS Compute Optimizer for recommendations. <a href="#">Learn more</a>
Private DNS	ip-172-31-47-154.ap-south-1.compute.internal
Private IPs	172.31.47.154
Secondary private IPs	
VPC ID	vpc-4d121b25
Subnet ID	subnet-fd4a7c95
Network interfaces	eth0
IAM role	-
Public DNS (IPv4)	ec2-3-6-36-237.ap-south-1.compute.amazonaws.com
IPv4 Public IP	3.6.36.237
IPv6 IPs	-
Elastic IPs	
Availability zone	ap-south-1a
Security groups	default. <a href="#">view inbound rules</a> . <a href="#">view outbound rules</a>
Scheduled events	No scheduled events
AMI ID	ubuntu/images/hvm-ssd/ubuntu-bionic-18.04-amd64-server-20200810 (ami-02b5fbc2cb28b77b8)
Platform details	Linux/UNIX
Usage operation	RunInstances
Source/dest. check	True

## 2. Task 2 : Launch Ubuntu instance using SSH



```
3.6.36.237
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

SSH client, X-server and networking tools

SSH session to ubuntu@3.6.36.237
  • SSH compression : ✓
  • SSH-browser      : ✓
  • X11-forwarding   : ✓ (remote display is forwarded through SSH)
  • DISPLAY          : ✓ (automatically set on remote server)

For more info, ctrl+click on help or visit our website

Welcome to Ubuntu 18.04.5 LTS (GNU/Linux 5.3.0-1032-aws x86_64)

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

System information as of Tue Aug 18 06:39:57 UTC 2020

System load:  0.02               Processes:    98
Usage of /:   14.4% of 7.69GB    Users logged in:  0
Memory usage: 19%               IP address for eth0: 172.31.47.154
Swap usage:   0%

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.

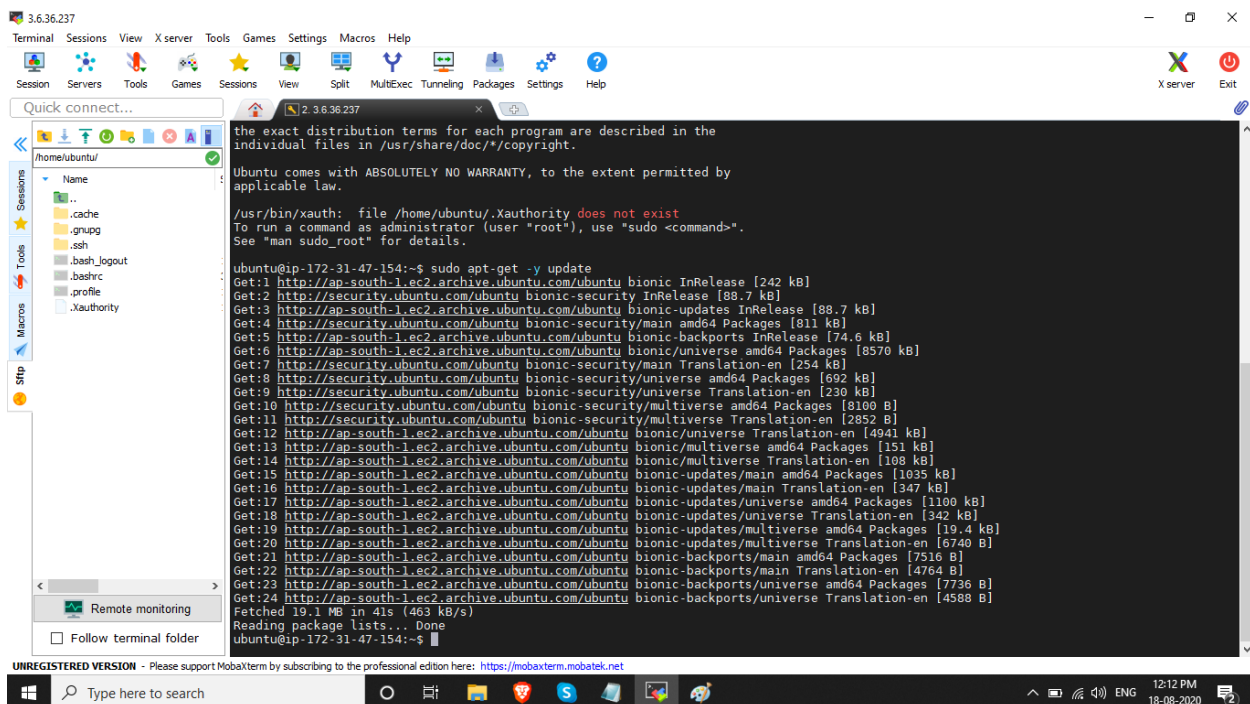
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

/usr/bin/xauth: file /home/ubuntu/.Xauthority does not exist
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-47-154:~$
```

## 3. Task 3 : Install nginx web server using bash

### a. sudo apt-get -y update



```
3.6.36.237
Terminal Sessions View X server Tools Games Settings Macros Help
Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

Quick connect...

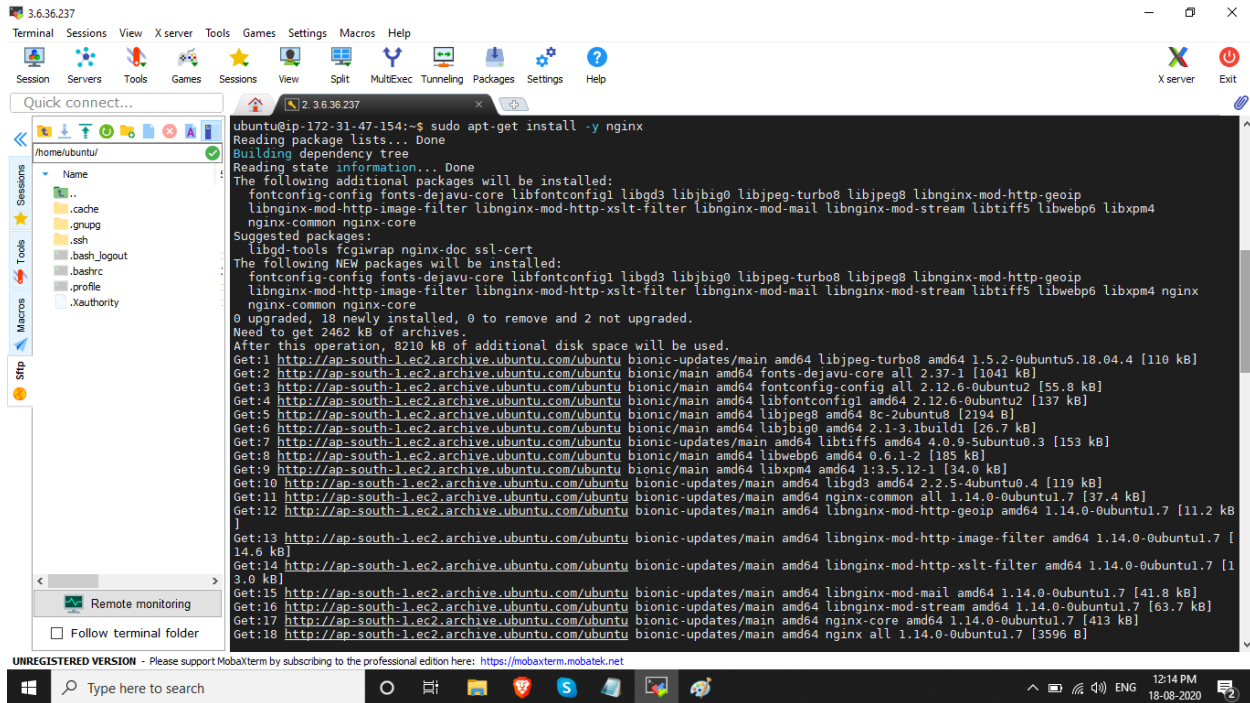
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

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

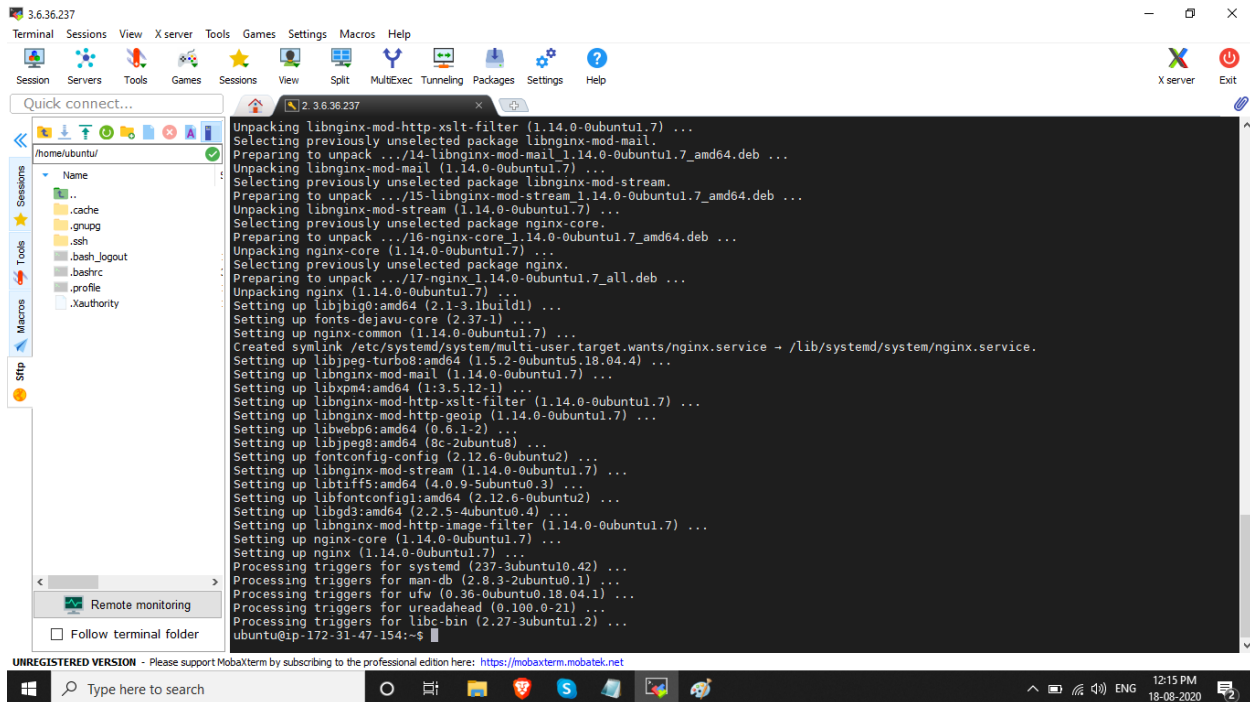
/usr/bin/xauth: file /home/ubuntu/.Xauthority does not exist
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-47-154:~$ sudo apt-get -y update
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic InRelease [242 kB]
Get:2 http://security.ubuntu.com/ubuntu bionic-security InRelease [88.7 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates InRelease [88.7 kB]
Get:4 http://security.ubuntu.com/ubuntu bionic-security/main amd64 Packages [811 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-backports InRelease [74.6 kB]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/universe amd64 Packages [8570 kB]
Get:7 http://security.ubuntu.com/ubuntu bionic-security/main Translation-en [254 kB]
Get:8 http://security.ubuntu.com/ubuntu bionic-security/universe amd64 Packages [692 kB]
Get:9 http://security.ubuntu.com/ubuntu bionic-security/universe Translation-en [230 kB]
Get:10 http://security.ubuntu.com/ubuntu bionic-security/multiverse amd64 Packages [8100 B]
Get:11 http://security.ubuntu.com/ubuntu bionic-security/multiverse Translation-en [2852 B]
Get:12 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/universe Translation-en [4941 kB]
Get:13 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/multiverse amd64 Packages [151 kB]
Get:14 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/multiverse Translation-en [108 kB]
Get:15 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 Packages [1035 kB]
Get:16 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main Translation-en [347 kB]
Get:17 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe amd64 Packages [1100 kB]
Get:18 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/universe Translation-en [342 kB]
Get:19 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse amd64 Packages [19.4 kB]
Get:20 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/multiverse Translation-en [6740 B]
Get:21 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/main amd64 Packages [7516 B]
Get:22 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/main Translation-en [4764 B]
Get:23 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe amd64 Packages [7736 B]
Get:24 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-backports/universe Translation-en [4588 B]
Fetched 19.1 MB in 41s (463 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-47-154:~$
```

## b. sudo apt-get -y install nginx



```
ubuntu@ip-172-31-47-154:~$ sudo apt-get install -y nginx
Reading package lists... Done
Building dependency tree
Reading state information... Done
The following additional packages will be installed:
  fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjpeg-turbo8 libjpeg8 libnginx-mod-http-geoip
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4
  nginx-common nginx-core
Suggested packages:
  libgd-tools fcgiwrap nginx-doc ssl-cert
The following NEW packages will be installed:
  fontconfig-config fonts-dejavu-core libfontconfig1 libgd3 libjpeg-turbo8 libjpeg8 libnginx-mod-http-geoip
  libnginx-mod-http-image-filter libnginx-mod-http-xslt-filter libnginx-mod-mail libnginx-mod-stream libtiff5 libwebp6 libxpm4 nginx
  nginx-common nginx-core
0 upgraded, 18 newly installed, 0 to remove and 2 not upgraded.
Need to get 2462 kB of archives.
After this operation, 8210 kB of additional disk space will be used.
Get:1 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libjpeg-turbo8 amd64 1.5.2-0ubuntu5.18.04.4 [110 kB]
Get:2 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 fonts-dejavu-core all 2.37-1 [1041 kB]
Get:3 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 fontconfig-config all 2.12.6-0ubuntu2 [55.8 kB]
Get:4 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libfontconfig1 amd64 2.12.6-0ubuntu2 [137 kB]
Get:5 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libjpeg8 amd64 8c-2ubuntu8 [2194 B]
Get:6 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libjpeg-turbo8 amd64 2.1.3-1build1 [26.7 kB]
Get:7 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libtiff5 amd64 4.0.9-5ubuntu0.3 [153 kB]
Get:8 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libwebp6 amd64 0.6.1-2 [185 kB]
Get:9 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic/main amd64 libxpm4 amd64 1:3.5.12-1 [34.0 kB]
Get:10 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libgd3 amd64 2.2.5-4ubuntu0.4 [119 kB]
Get:11 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nginx-common all 1.14.0-0ubuntu1.7 [37.4 kB]
Get:12 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-geoip amd64 1.14.0-0ubuntu1.7 [11.2 kB]
Get:13 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-image-filter amd64 1.14.0-0ubuntu1.7 [14.6 kB]
Get:14 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-http-xslt-filter amd64 1.14.0-0ubuntu1.7 [13.0 kB]
Get:15 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-mail amd64 1.14.0-0ubuntu1.7 [41.8 kB]
Get:16 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 libnginx-mod-stream amd64 1.14.0-0ubuntu1.7 [63.7 kB]
Get:17 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nginx-core amd64 1.14.0-0ubuntu1.7 [413 kB]
Get:18 http://ap-south-1.ec2.archive.ubuntu.com/ubuntu bionic-updates/main amd64 nginx all 1.14.0-0ubuntu1.7 [3596 B]
debconf: delaying package configuration, since apt-utils is not installed
ubuntu@ip-172-31-47-154:~$
```



```
Unpacking libnginx-mod-http-xslt-filter (1.14.0-0ubuntu1.7) ...
Selecting previously unselected package libnginx-mod-mail.
Preparing to unpack .../14-libnginx-mod-mail_1.14.0-0ubuntu1.7_amd64.deb ...
Unpacking libnginx-mod-mail (1.14.0-0ubuntu1.7) ...
Selecting previously unselected package libnginx-mod-stream.
Preparing to unpack .../15-libnginx-mod-stream_1.14.0-0ubuntu1.7_amd64.deb ...
Unpacking libnginx-mod-stream (1.14.0-0ubuntu1.7) ...
Selecting previously unselected package nginx-core.
Preparing to unpack .../16-nginx-core_1.14.0-0ubuntu1.7_amd64.deb ...
Unpacking nginx-core (1.14.0-0ubuntu1.7) ...
Selecting previously unselected package nginx.
Preparing to unpack .../17-nginx_1.14.0-0ubuntu1.7_all.deb ...
Unpacking nginx (1.14.0-0ubuntu1.7) ...
Setting up libjpeg8:amd64 (8c-2ubuntu8) ...
Setting up fonts-dejavu-core (2.37-1) ...
Setting up nginx-common (1.14.0-0ubuntu1.7) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /lib/systemd/system/nginx.service.
Setting up libjpeg-turbo8:amd64 (1.5.2-0ubuntu5.18.04.4) ...
Setting up libnginx-mod-mail (1.14.0-0ubuntu1.7) ...
Setting up libxpm4:amd64 (1:3.5.12-1) ...
Setting up libnginx-mod-http-xslt-filter (1.14.0-0ubuntu1.7) ...
Setting up libnginx-mod-http-geoip (1.14.0-0ubuntu1.7) ...
Setting up libwebp6:amd64 (0.6.1-2) ...
Setting up libjpeg8:amd64 (8c-2ubuntu8) ...
Setting up fontconfig-config (2.12.6-0ubuntu2) ...
Setting up libnginx-mod-stream (1.14.0-0ubuntu1.7) ...
Setting up libtiff5:amd64 (4.0.9-5ubuntu0.3) ...
Setting up libfontconfig1:amd64 (2.12.6-0ubuntu2) ...
Setting up libgd3:amd64 (2.2.5-4ubuntu0.4) ...
Setting up libnginx-mod-http-image-filter (1.14.0-0ubuntu1.7) ...
Setting up nginx-core (1.14.0-0ubuntu1.7) ...
Setting up nginx (1.14.0-0ubuntu1.7) ...
Processing triggers for systemd (237-3ubuntu10.42) ...
Processing triggers for man-db (2.8.3-2ubuntu0.1) ...
Processing triggers for ufw (0.36-0ubuntu0.18.04.1) ...
Processing triggers for ureadahead (0.100.0-21) ...
Processing triggers for libc-bin (2.27-3ubuntu1.2) ...
ubuntu@ip-172-31-47-154:~$
```

#### 4. Task 4 : Verify successful installation of nginx web server

