

Module-3: ELB Assignment - 1

You have been asked to:

1. Create a Classic Load Balancer and register 3 EC2 instances with different web pages running in them
 2. Migrate the Classic Load Balancer into an Application Load Balancer
-

Launch an instance Info

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags Info

Name

Web-Server-01

Add additional tags

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

 Search our full catalog including 1000s of application and OS images

Recents

Quick Start

Amazon Linux

macOS

Ubuntu

Windows

Red Hat

S



Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

Free tier eligible

▼ Summary

Number of instances Info

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)

ami-08c40ec9ead489470

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB



Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.

Cancel

Launch Instance

t2.micro

Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0116 USD per Hour
On-Demand Windows pricing: 0.0162 USD per Hour

Free tier eligible

Compare instance types

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

Web-prod-keypair

Create new key pair

▼ Network settings [Info](#)

Edit

Network [Info](#)

vpc-0b03f01cba75ff067

Subnet [Info](#)

No preference (Default subnet in any availability zone)

Auto-assign public IP [Info](#)

Enable

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

 Create security group Select existing security groupSecurity groups [Info](#)

Select security group

default sg-0eccae16b46e70a9d

Compare security group rules

Cancel

Launch Instance

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)
ami-08c40ec9ead489470

Virtual server type (instance type)

t2.micro

Firewall (security group)

default

Storage (volumes)

1 volume(s) - 8 GiB

Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable) instance usage on free tier AMIs per month, 30 GiB of EBS storage, 2 million I/Os, 1 GB of snapshots, and 100 GB of bandwidth to the internet.



Successfully initiated launch of instance (i-0ae89495d3baa81b1)

▶ Launch log

Next Steps

Create billing and free tier usage alerts

To manage costs and avoid surprise bills, set up email notifications for billing and free tier usage thresholds.

[Create billing alerts](#)

Connect to your instance

Once your instance is running, log into it from your local computer.

[Connect to instance](#)

[Learn more](#)

Connect an RDS database New

Configure the connection between an EC2 instance and a database to allow traffic flow between them.

[Connect an RDS database](#)

[Create a new RDS database](#) [Learn more](#)

[View all instances](#)

Instances (1/3) [Info](#)

Connect

Instance state ▾

Actions ▾

Launch instances



1



Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...
<input checked="" type="checkbox"/> Web-Server-01	i-0ae89495d3baa81b1	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-54-172-50-26.com...	54.172.50.26
<input type="checkbox"/> Web-Server-03	i-095c19a948f400553	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-3-86-236-90.comp...	3.86.236.90
<input type="checkbox"/> Web-Server-02	i-04e8edf28c0fd5168	Running	t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-3-86-81-147.comp...	3.86.81.147

Instance: i-0ae89495d3baa81b1 (Web-Server-01)



Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance summary [Info](#)

Instance ID

 i-0ae89495d3baa81b1 (Web-Server-01)

IPv6 address

Hostname type

IP name: ip-172-31-25-42.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

 54.172.50.26 [Public IP]

IAM Role

Public IPv4 address copied

 54.172.50.26 | [open address](#)

Instance state

Running

Private IP DNS name (IPv4 only)

 ip-172-31-25-42.ec2.internal

Instance type

t2.micro

VPC ID

 vpc-0b03f01cba75ff067

Subnet ID

 subnet-0fa59c1c0cf77468a

Private IPv4 addresses

 172.31.25.42

Public IPv4 DNS

 ec2-54-172-50-26.compute-1.amazonaws.com | [open address](#)

Elastic IP addresses

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations.

[Learn more](#)

Auto Scaling Group name

Session settings



Basic SSH settings

Remote host * 54.172.50.26

Specify username

ubuntu



Port 22

Advanced SSH settings

Terminal settings

Network settings

Bookmark settings

X11-Forwarding

Compression

Remote environment: Interactive shell

Execute command:

Do not exit after command ends



SSH-browser type: SFTP protocol

Follow SSH path (experimental)

Use private key

C:\Users\Lenovo\Downloads\db-P

Adapt locales on remote server

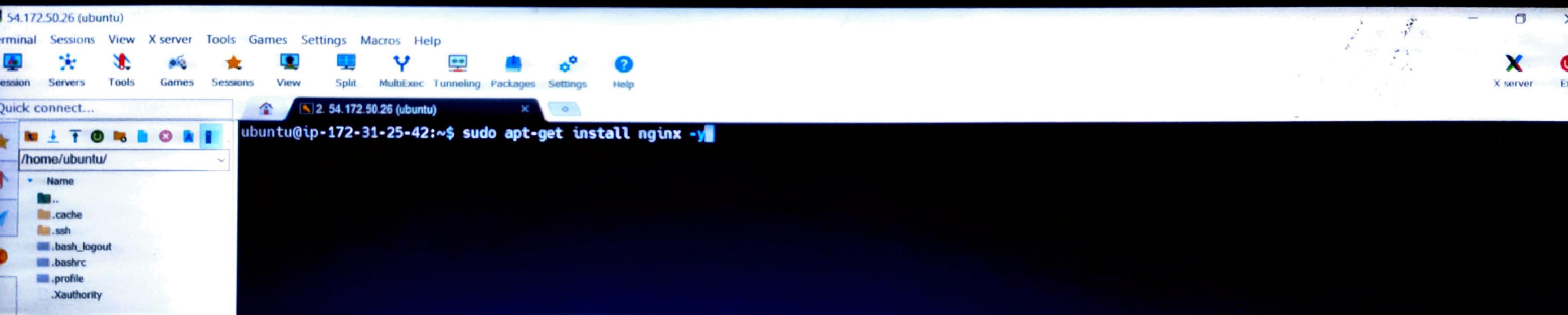
Execute macro at session start: <none>



OK



Cancel



54.172.50.26 (ubuntu)

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

X server Exit

Quick connect...

2. 54.172.50.26 (ubuntu)

```
Unpacking nginx-core (1.18.0-6ubuntu14.2) ...
Selecting previously unselected package nginx.
Preparing to unpack .../19-nginx_1.18.0-6ubuntu14.2_amd64.deb ...
Unpacking nginx (1.18.0-6ubuntu14.2) ...
Setting up libxml2:amd64 (1:3.5.12-1build2) ...
Setting up libdeflate0:amd64 (1.10-2) ...
Setting up nginx-common (1.18.0-6ubuntu14.2) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /lib/systemd/system/nginx.service.
Setting up libjbig2:amd64 (2.1-3.1build3) ...
Setting up libnginx-mod-http-xslt-filter (1.18.0-6ubuntu14.2) ...
Setting up fonts-dejavu-core (2.37-2build1) ...
Setting up libjpeg-turbo8:amd64 (2.1.2-0ubuntu1) ...
Setting up libwebp7:amd64 (1.2.2-2) ...
Setting up libnginx-mod-http-geoip2 (1.18.0-6ubuntu14.2) ...
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up libnginx-mod-mail (1.18.0-6ubuntu14.2) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.2) ...
Setting up libtiff5:amd64 (4.3.0-6ubuntu0.1) ...
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geoip2 (1.18.0-6ubuntu14.2) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.2) ...
Setting up nginx-core (1.18.0-6ubuntu14.2) ...
 * Upgrading binary nginx
Setting up nginx (1.18.0-6ubuntu14.2) ...
Processing triggers for ufw (0.36.1-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes ...
Scanning linux images ...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-25-42:~$ [OK]
```

Remote monitoring

Follow terminal folder



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.

Instances (1/3) Info



Connect

Instance state ▾

Actions ▾

Launch instances

< 1 > ⌂

Find instance by attribute or tag (case-sensitive)

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...
Web-Server-01	i-0ae89495d3baa81b1	Running	t2.micro	2/2 checks passed	No alarms	+ us-east-1a	ec2-54-172-50-26.com...	54.172.50.26
Web-Server-03	i-095c19a948f400553	Running	t2.micro	2/2 checks passed	No alarms	+ us-east-1d	ec2-3-86-236-90.comp...	3.86.236.90
<input checked="" type="checkbox"/> Web-Server-02	i-04e8edf28c0fd5168	Running	t2.micro	2/2 checks passed	No alarms	+ us-east-1d	ec2-3-86-81-147.comp...	3.86.81.147

Instance: i-04e8edf28c0fd5168 (Web-Server-02)



Details | Security | Networking | Storage | Status checks | Monitoring | Tags

▼ Instance summary [Info](#)

Instance ID

[i-04e8edf28c0fd5168 \(Web-Server-02\)](#)

IPv6 address

Hostname type

IP name: ip-172-31-92-251.ec2.internal

Answer private resource DNS name

IPv4 (A)

Auto-assigned IP address

[3.86.81.147 \[Public IP\]](#)

IAM Role

Public IPv4 address copied

[3.86.81.147 | open address](#)Instance state
 Running

Private IP DNS name (IPv4 only)

[ip-172-31-92-251.ec2.internal](#)Instance type
t2.microVPC ID
[vpc-0b03f01cba75ff067](#)Subnet ID
[subnet-0106a319f599ab40d](#)

Private IPv4 addresses

[172.31.92.251](#)

Public IPv4 DNS

[ec2-3-86-81-147.compute-1.amazonaws.com | open address](#)

Elastic IP addresses

AWS Compute Optimizer finding

[Opt-in to AWS Compute Optimizer for recommendations.](#)[Learn more](#)

Auto Scaling Group name

Session settings



Basic SSH settings

Remote host * 3.86.81.147

Specify username

ubuntu



Port

22



Advanced SSH settings

Terminal settings

Network settings

Bookmark settings

X11-Forwarding

Compression

Remote environment: Interactive shell

Do not exit after command ends

Execute command:

SSH-browser type:

SFTP protocol

Follow SSH path (experimental)



Use private key

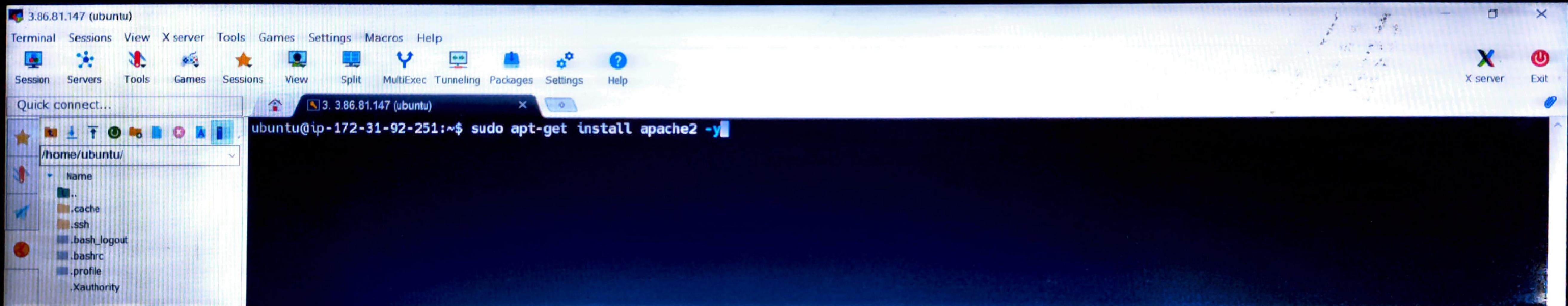
C:\Users\Lenovo\Downloads\Web

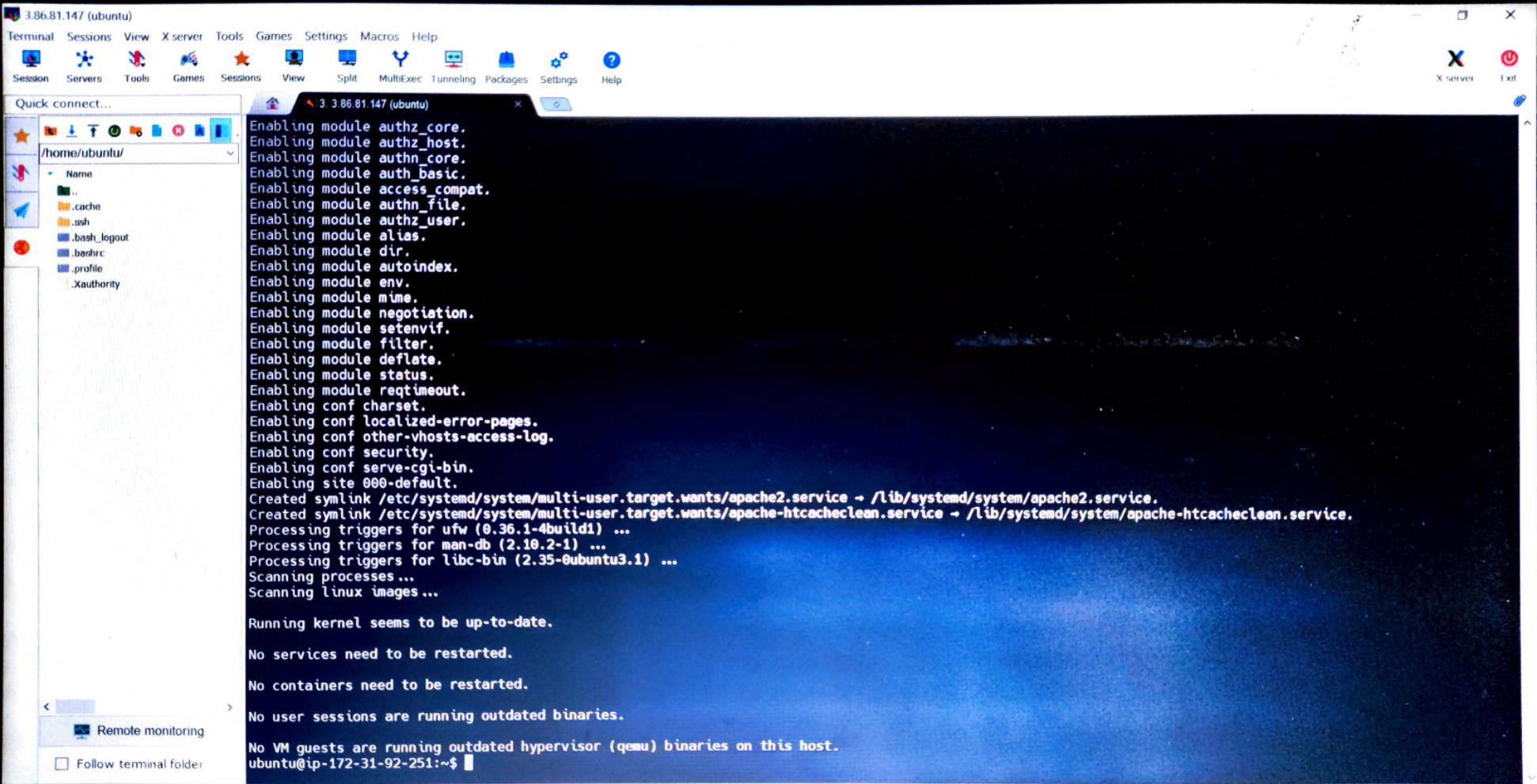
Adapt locales on remote server

Execute macro at session start: <none>

OK

Cancel







Apache2 Default Page

Ubuntu

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should [replace this file](#) (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the [manual](#) if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
|-- apache2.conf
|   '-- ports.conf
|-- mods-enabled
|   '-- *.Load
|   '-- *.conf
|-- conf-enabled
|   '-- *.conf
|-- sites-enabled
|   '-- *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations respectively.

Instances (1/3) [Info](#)

Connect

Instance state ▾

Actions ▾

Launch instances

< 1 >



Find instance by attribute or tag (case-sensitive)

Instance state = running



Clear filters

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...
<input checked="" type="checkbox"/> Web-Server-03	i-08d45a23b1fcf54c7	Running		t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-107-21-168-54.co... 107.21.168.54
<input type="checkbox"/> Web-Server-01	i-0ae89495d3baa81b1	Running		t2.micro	2/2 checks passed	No alarms	us-east-1a	ec2-54-172-50-26.com... 54.172.50.26
<input type="checkbox"/> Web-Server-02	i-04e8edf28c0fd5168	Running		t2.micro	2/2 checks passed	No alarms	us-east-1d	ec2-3-86-81-147.comp... 3.86.81.147

Instance: i-08d45a23b1fcf54c7 (Web-Server-03)


[Details](#) [Security](#) [Networking](#) [Storage](#) [Status checks](#) [Monitoring](#) [Tags](#)
▼ Instance summary [Info](#)

Instance ID

i-08d45a23b1fcf54c7 (Web-Server-03)

Public IPv4 address

 107.21.168.54 | [open address](#)

Private IPv4 addresses

172.31.25.61

IPv6 address

-

Public IPv4 DNS

 ec2-107-21-168-54.compute-1.amazonaws.com | [open address](#)

Hostname type

IP name: ip-172-31-25-61.ec2.internal

Private IP DNS name (IPv4 only)

ip-172-31-25-61.ec2.internal

Answer private resource DNS name

IPv4 (A)

Instance type

t2.micro

Elastic IP addresses

Auto-assigned IP address

107.21.168.54 [Public IP]

VPC ID

vpc-0b03f01cba75ff067

AWS Compute Optimizer finding

Opt-in to AWS Compute Optimizer for recommendations.

[Learn more](#)



SSH



Telnet



Rsh



Xdmcp



RDP



VNC



FTP



SFTP



Serial



File



Shell



Browser



Mosh



Aws S3



WSL

Basic SSH settings

Remote host * 107.21.168.54

 Specify username

ubuntu



Port 22



Advanced SSH settings

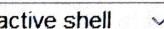
Terminal settings

Network settings

Bookmark settings

 X11-Forwarding Compression

Remote environment: Interactive shell

Execute command: Do not exit after command ends

SSH-browser type:

SFTP protocol

 Follow SSH path (experimental) Use private key C:\Users\Lenovo\Downloads\Web Adapt locales on remote server

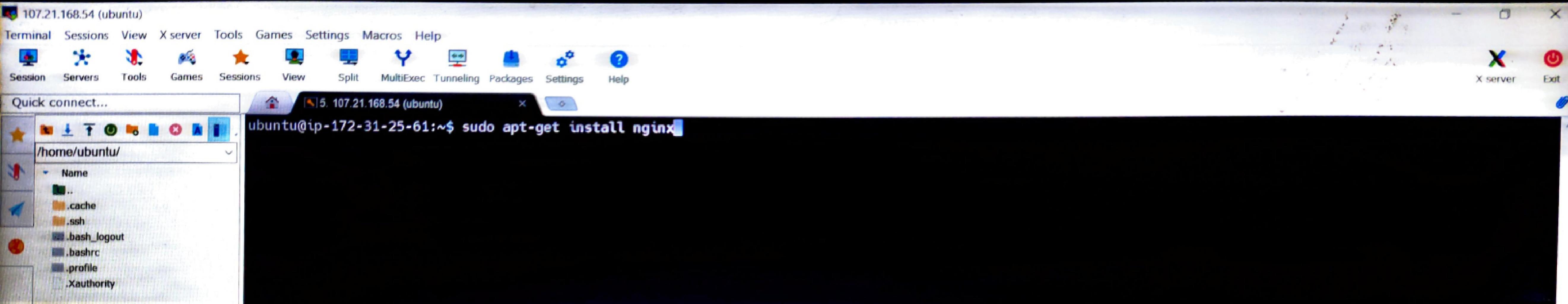
Execute macro at session start: <none>



OK



Cancel



107.21.168.54 (ubuntu)

Terminal Sessions View X server Tools Games Settings Macros Help

Session Servers Tools Games Sessions View Split MultiExec Tunneling Packages Settings Help

X server Exit

Quick connect... 5. 107.21.168.54 (ubuntu)

Unpacking nginx-core (1.18.0-6ubuntu14.2) ...
Selecting previously unselected package nginx.
Preparing to unpack .../19-nginx_1.18.0-6ubuntu14.2_amd64.deb ...
Unpacking nginx (1.18.0-6ubuntu14.2) ...
Setting up libxml2:amd64 (1:3.5.12~ibuild2) ...
Setting up libdeflate0:amd64 (1.10-2) ...
Setting up nginx-common (1.18.0-6ubuntu14.2) ...
Created symlink /etc/systemd/system/multi-user.target.wants/nginx.service → /lib/systemd/system/nginx.service.
Setting up libjbig0:amd64 (2.1-3.1build3) ...
Setting up libnginx-mod-http-xslt-filter (1.18.0-6ubuntu14.2) ...
Setting up fonts-dejavu-core (2.37-2build1) ...
Setting up libjpeg-turbo8:amd64 (2.1.2-0ubuntu1) ...
Setting up libwebp7:amd64 (1.2.2-2) ...
Setting up libnginx-mod-http-geoip2 (1.18.0-6ubuntu14.2) ...
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up libnginx-mod-mail (1.18.0-6ubuntu14.2) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.2) ...
Setting up libtiff5:amd64 (4.3.0-6ubuntu0.1) ...
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geoip2 (1.18.0-6ubuntu14.2) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.2) ...
Setting up nginx-core (1.18.0-6ubuntu14.2) ...
* Upgrading binary nginx
Setting up nginx (1.18.0-6ubuntu14.2) ...
Processing triggers for ufw (0.36.1-4build1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning linux images ...

Running kernel seems to be up-to-date.

No services need to be restarted. I

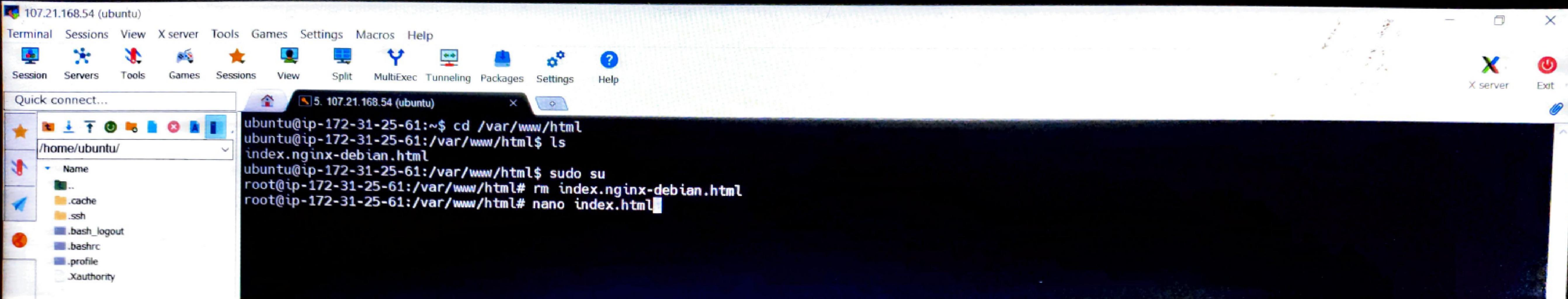
No containers need to be restarted.

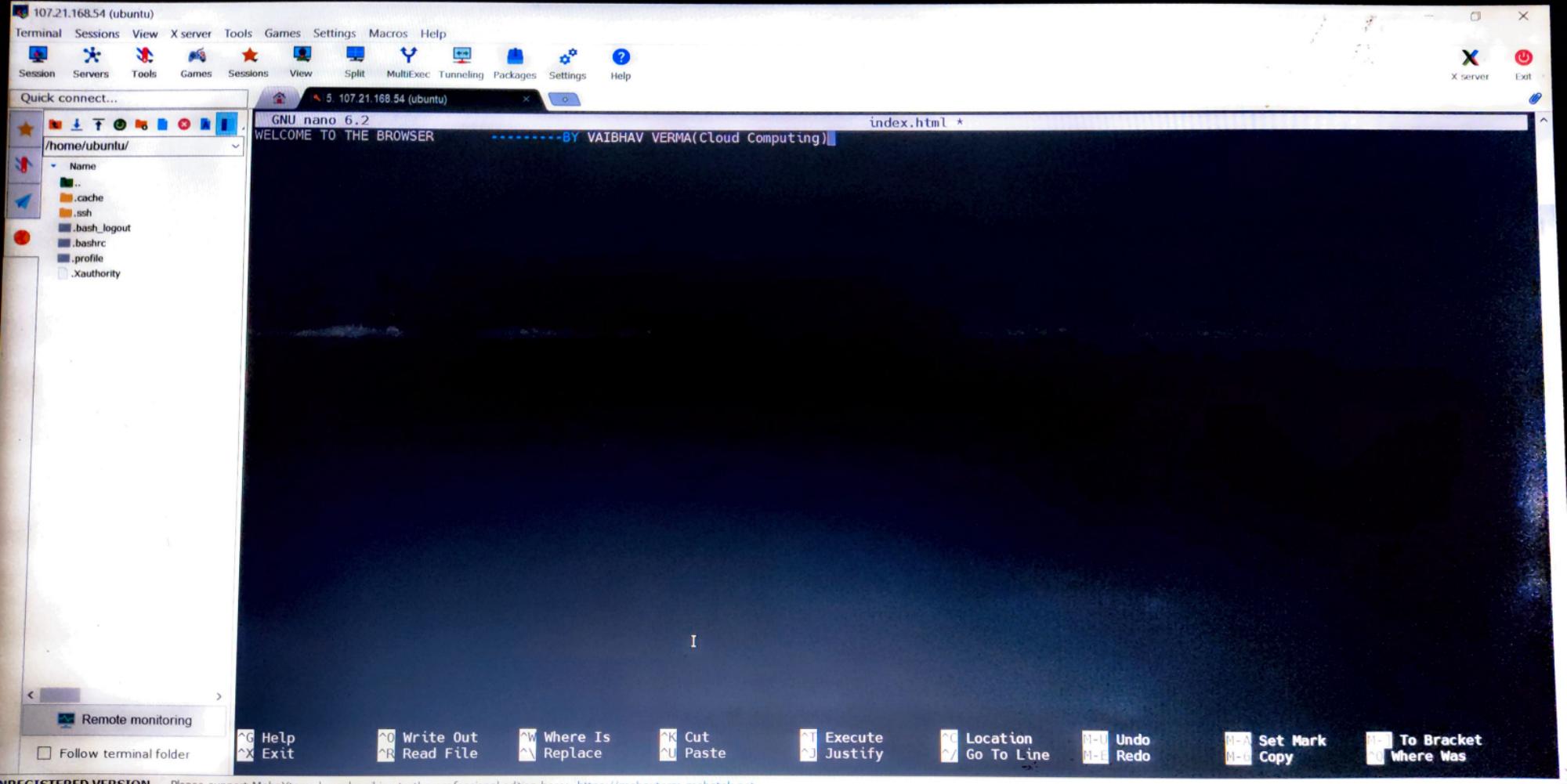
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-25-61:~\$ clear

Remote monitoring
 Follow terminal folder

UNREGISTERED VERSION - Please support Mobatek by subscribing to the professional edition here: <https://mobatek.net/mobateknet>







WELCOME TO THE BROWSER ——BY VAIBHAV VERMA(Cloud Computing)

AWS Services Search [Alt+S] N. Virginia VAIBHAV VERMA

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

Images

AMIs New

AMI Catalog

Elastic Block Store

Volumes

Snapshots

Lifecycle Manager

Network & Security

Security Groups

Elastic IPs

Placement Groups

Key Pairs

Network Interfaces

Load Balancing

Load Balancers

Target Groups New

Auto Scaling

Launch Configurations

Auto Scaling Groups

Create Load Balancer Actions ▾

Filter by tags and attributes or search by keyword

K < None found > ▾

Name DNS name State VPC ID Availability Zones Type Created At Monitoring

You do not have any load balancers in this region

Select a load balancer

Feedback Looking for language selection? Find it in the new Unified Settings

© 2022, Amazon Internet Services Private Ltd. or its affiliates. Privacy Terms Coolie preferences

Choose an Application Load Balancer when you need a flexible feature set for your applications with HTTP and HTTPS traffic. Operating at the request level, Application Load Balancers provide advanced routing and visibility features targeted at application architectures, including microservices and containers.

[Create](#)

Choose a Network Load Balancer when you need ultra-high performance, TLS offloading at scale, centralized certificate deployment, support for UDP, and static IP addresses for your applications. Operating at the connection level, Network Load Balancers are capable of handling millions of requests per second securely while maintaining ultra-low latencies.

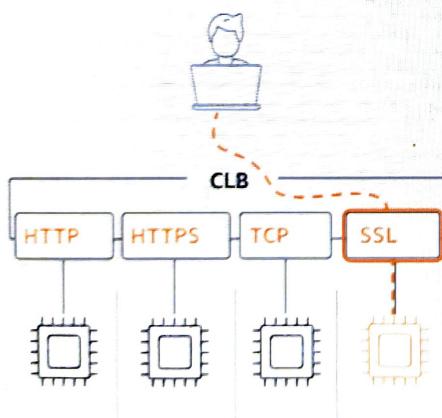
[Create](#)

Choose a Gateway Load Balancer when you need to deploy and manage a fleet of third-party virtual appliances that support GENEVE. These appliances enable you to improve security, compliance, and policy controls.

[Create](#)

▼ Classic Load Balancer - previous generation

Classic Load Balancer [Info](#)



Choose a Classic Load Balancer when you have an existing application running in the EC2-Classic network.

i AWS will be retiring the EC2-Classic network on August 15, 2022. [Learn more](#) ↗

[Create](#)[Close](#)

[1. Define Load Balancer](#)[2. Assign Security Groups](#)[3. Configure Security Settings](#)[4. Configure Health Check](#)[5. Add EC2 Instances](#)[6. Add Tags](#)[7. Review](#)

Step 1: Define Load Balancer

Basic Configuration

This wizard will walk you through setting up a new load balancer. Begin by giving your new load balancer a unique name so that you can identify it from other load balancers you might create. You will also need to configure ports and protocols for your load balancer. Traffic from your clients can be routed from any load balancer port to any port on your EC2 instances. By default, we've configured your load balancer with a standard web server on port 80.

Load Balancer name:

Create LB Inside:

Create an internal load balancer: (what's this?)

Enable advanced VPC configuration:

Listener Configuration:

Load Balancer Protocol

Load Balancer Port

Instance Protocol

Instance Port

Add

[Cancel](#) [Next: Assign Security Groups](#)

[1. Define Load Balancer](#)[2. Assign Security Groups](#)[3. Configure Security Settings](#)[4. Configure Health Check](#)[5. Add EC2 Instances](#)[6. Add Tags](#)[7. Review](#)

Step 2: Assign Security Groups

You have selected the option of having your Elastic Load Balancer inside of a VPC, which allows you to assign security groups to your load balancer. Please select the security groups to assign to this load balancer. This can be changed at any time.

Assign a security group: Create a **new** security group

Select an **existing** security group

Filter VPC security groups ▾

Security Group ID	Name	Description	Actions
<input checked="" type="checkbox"/> sg-0eccae16b46e70a9d	default	default VPC security group	Copy to new
<input type="checkbox"/> sg-09f5dbdbbf64a22d1	launch-wizard-1	launch-wizard-1 created 2022-08-14T06:32:15.564Z	Copy to new
<input type="checkbox"/> sg-01a0bcaec80a99fdc	launch-wizard-2	launch-wizard-2 created 2022-10-01T20:59:03.406Z	Copy to new
<input type="checkbox"/> sg-0a6bb4e9c7ba6e7ff	launch-wizard-3	launch-wizard-3 created 2022-08-13T11:19:04.826Z	Copy to new
<input type="checkbox"/> sg-0aa93e76507f1d6b2	launch-wizard-4	launch-wizard-4 created 2022-10-23T07:35:42.219Z	Copy to new
<input type="checkbox"/> sg-0c3819ee74280dbc7	launch-wizard-5	launch-wizard-5 created 2022-10-26T09:18:19.408Z	Copy to new
<input type="checkbox"/> sg-08733198ab61401a9	mySG	sg	Copy to new
<input type="checkbox"/> sg-0f8a7099ce2855bfc	rds-ec2-mysql-SG	launch-wizard-4 created 2022-10-02T10:52:38.591Z	Copy to new
<input type="checkbox"/> sg-03f742706910d62d0	rds-sg-ec2-02-10-2022	allow access from ec2	Copy to new

[Cancel](#)[Previous](#)[Next: Configure Security Settings](#)

[1. Define Load Balancer](#)[2 Assign Security Groups](#)[3. Configure Security Settings](#)[4. Configure Health Check](#)[5. Add EC2 Instances](#)[6. Add Tags](#)[7. Review](#)

Step 3: Configure Security Settings



Improve your load balancer's security. Your load balancer is not using any secure listener.

If your traffic to the load balancer needs to be secure, use either the HTTPS or the SSL protocol for your front-end connection. You can go back to the first step to add/configure secure listeners under [Basic Configuration](#) section. You can also continue with current settings.

[Cancel](#)[Previous](#)[Next: Configure Health Check](#)

[1. Define Load Balancer](#)[2. Assign Security Groups](#)[3. Configure Security Settings](#)[4. Configure Health Check](#)[5. Add EC2 Instances](#)[6. Add Tags](#)[7. Review](#)

Step 4: Configure Health Check

Your load balancer will automatically perform health checks on your EC2 instances and only route traffic to instances that pass the health check. If an instance fails the health check, it is automatically removed from the load balancer. Customize the health check to meet your specific needs.

Ping Protocol

Ping Port

Ping Path

Advanced Details

Response Timeout seconds

Interval seconds

Unhealthy threshold

Healthy threshold

[Cancel](#) [Previous](#) [Next: Add EC2 Instances](#)

1. Define Load Balancer
2. Assign Security Groups
3. Configure Security Settings
4. Configure Health Check
5. Add EC2 Instances
6. Add Tags
7. Review

Step 5: Add EC2 Instances

The table below lists all your running EC2 Instances. Check the boxes in the Select column to add those instances to this load balancer.

VPC vpc-0b03f01cba75ff067 (172.31.0.0/16)

Instance	Name	State	Security groups	Zone	Subnet ID	Subnet CIDR
<input type="checkbox"/> i-08d45a23b1fcf54c7	Web-Server-03	running	default	us-east-1a	subnet-0fa59c1c...	172.31.16.0/20
<input type="checkbox"/> i-0ae89495d3baa81b1	Web-Server-01	running	default	us-east-1a	subnet-0fa59c1c...	172.31.16.0/20
<input type="checkbox"/> i-04e8edf28c0fd5168	Web-Server-02	running	default	us-east-1d	subnet-0106a31...	172.31.80.0/20

Availability Zone Distribution

2 instances in us-east-1a

1 instance in us-east-1d

Enable Cross-Zone Load Balancing

Enable Connection Draining 300 seconds

[Cancel](#) [Previous](#) [Next: Add Tags](#)

Step 7: Review

Please review the load balancer details before continuing

▼ Define Load Balancer

[Edit load balancer definition](#)**Load Balancer name:** LoadBalancer**Scheme:** internet-facing**Port Configuration:** 80 (HTTP) forwarding to 80 (HTTP)

▼ Configure Health Check

[Edit health check](#)**Ping Target:** HTTP 80/index.html**Timeout:** 5 seconds**Interval:** 30 seconds**Unhealthy threshold:** 2**Healthy threshold:** 10

▼ Add EC2 Instances

[Edit instances](#)**Cross-zone load balancing:** Enabled**Connection Draining:** Enabled, 300 seconds**Instances:** i-08d45a23b1fc54c7 (Web-Server-03), i-0ae89495d3baa81b1 (Web-Server-01), i-04e8edf28c0fd5168 (Web-Server-02)

▼ VPC Information

[Edit subnets](#)**VPC:** vpc-0b03f01cba75ff067**Subnets:** subnet-0c130f14b2821e65a, subnet-0106a319f599ab40d, subnet-098f838aa75f6625b, subnet-0fa59c1c0cf77468a, subnet-0ca07fef3bfe84bc0, subnet-0e5d9322efe5f0177

▼ Security groups

[Edit security groups](#)**Security groups:** sg-0ecccae16b46e70a9d[Cancel](#) [Previous](#)[Create](#)

Load Balancer Creation Status

- Successfully created load balancer

Load balancer [LoadBalancer](#) was successfully created.

Note: It may take a few minutes for your instances to become active in the new load balancer.

 Close

[Create Load Balancer](#) [Actions ▾](#)

Filter by tags and attributes or search by keyword K < 1 to 1 of 1 >

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
LoadBalancer	LoadBalancer-1220621535....	Active	vpc-0b03f01cba75ff067	us-east-1f, us-east-1e, ...	classic	November 6, 2022 at 3:19:51...	

Load balancer: LoadBalancer

[Description](#) [Instances](#) [Health check](#) [Listeners](#) [Monitoring](#) [Tags](#) [Migration](#)

Basic Configuration

Name	LoadBalancer	Migrate this Classic Load Balancer to a next generation load balancer.
* DNS name	LoadBalancer-1220621535....	(Optional) Enter a custom DNS name for your load balancer.
Type	Classic (Migrate Now)	
Scheme	internet-facing	
Availability Zones	subnet-0106a319f599ab40d - us-east-1d, subnet-098f838aa75f6625b - us-east-1e, subnet-0c130f14b2821e65a - us-east-1c, subnet-0ca07fef3bfe84bc0 - us-east-1f, subnet-0e5d9322efe5f0177 - us-east-1b, subnet-0fa59c1c0cf77468a - us-east-1a	

Creation time: November 6, 2022 at 3:19:52 PM UTC+5:30
Hosted zone: Z35SXDOTRQ7X7K
Status: 2 of 3 instances in service
VPC: vpc-0b03f01cba75ff067

Port Configuration

Port Configuration	80 (HTTP) forwarding to 80 (HTTP)
Stickiness: Disabled	
Edit stickiness	

Create Load Balancer

Actions ▾



Filter by tags and attributes or search by keyword

K < 1 to 1 of 1 > X

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
LoadBalancer	LoadBalancer-1220621535...	Active	vpc-0b03f01cba75ff067	us-east-1f, us-east-1e, ...	classic	November 6, 2022 at 3:19:5...	

Load balancer: LoadBalancer

[Description](#) [Instances](#) [Health check](#) [Listeners](#) [Monitoring](#) [Tags](#) [Migration](#)Migrate this Classic Load Balancer to a next generation load balancer. See [Comparison of Elastic Load Balancing Products](#).[Launch ALB Migration Wizard](#)

[1. Configure Load Balancer](#)[2. Configure Security Settings](#)[3. Configure Security Groups](#)[4. Configure Routing](#)[5. Register Targets](#)[6. Review](#)

Step 6: Review

Please review the load balancer details before continuing

The highlighted fields below indicate the new values (green) and the original values (grey).

▼ Load balancer

Name LoadBalancer**Scheme** internet-facing**Listeners** Port 80 - Protocol HTTP**IP address type** ipv4**VPC** vpc-0b03f01cba75ff067**Subnets** subnet-0fa59c1c0cf77468a, subnet-0e5d9322efe5f0177, subnet-0c130f14b2821e65a, subnet-0106a319f599ab40d, subnet-098f838aa75f6625b, subnet-0ca07fef3bfe84bc0**Tags**

Edit

▼ Security groups

Security groups sg-0ecca16b46e70a9d

Edit

▼ Routing

Target group New target group**Target group name** LoadBalancer-01**Port** 80**Target type** instance**Protocol** HTTP**Health check protocol** HTTP**Path** /

/index.html

Health check port 80**Healthy threshold** 10

Edit

[Cancel](#) [Previous](#)[Create](#)

Load Balancer Creation Status

✓ Successfully created load balancer

Load balancer `LoadBalancer` was successfully created.

Note: It might take a few minutes for your load balancer to be fully set up and ready to route traffic, and for the targets to complete the registration process and pass the initial health checks.

After migration is complete, you can do the following as needed:

- Redirect traffic to your new load balancer (see [Migrate Traffic](#))
- Change the deregistration delay (see [Deregistration Delay](#)). The default is 300 seconds.
- Change the idle connection timeout if needed (see [Connection Idle Timeout](#)). The default is 60 seconds.
- Enable access logs (see [Access Logs](#))

Suggested next steps

- Discover other services that you can integrate with your load balancer. Visit the [Integrated services](#) tab within `LoadBalancer`.
- Consider using AWS Global Accelerator to further improve the availability and performance of your applications. [AWS Global Accelerator console](#)

Create Load Balancer

Actions ▾

Filter by tags and attributes or search by keyword

K < 1 to 2 of 2 > X

Name	DNS name	State	VPC ID	Availability Zones	Type	Created At	Monitoring
LoadBalancer	LoadBalancer-1220621535...		vpc-0b03f01cba75ff067	us-east-1f, us-east-1e, ...	classic	November 6, 2022 at 3:19 5...	
LoadBalancer	LoadBalancer-613530502.us...	Active	vpc-0b03f01cba75ff067	us-east-1d, us-east-1e, ...	application	November 6, 2022 at 4:06 5...	

Load balancer: LoadBalancer

Description Listeners Monitoring Integrated services Tags

Basic Configuration

Name	LoadBalancer
ARN	arn:aws:elasticloadbalancing:us-east-1:111952067877:loadbalancer/app/LoadBalancer/ddb7546b0647fe24
DNS name	LoadBalancer-613530502.us-east-1.elb.amazonaws.com
State	Active
Type	application
Scheme	internet-facing
IP address type	ipv4
	Edit IP address type
VPC	vpc-0b03f01cba75ff067
Availability Zones	subnet-0106a319f599ab40d - us-east-1d IPv4 address: Assigned by AWS
	subnet-098f838aa75f6625b - us-east-1e IPv4 address: Assigned by AWS

Not secure | loadbalancer-613530502.us-east-1.elb.amazonaws.com

Refresh (Ctrl+R)

Ubuntu Logo

Apache2 Default Page

It works!

This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should **replace this file** (located at `/var/www/html/index.html`) before continuing to operate your HTTP server.

If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.

Configuration Overview

Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is **fully documented in `/usr/share/doc/apache2/README.Debian.gz`**. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the **manual** if the `apache2-doc` package was installed on this server.

The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:

```
/etc/apache2/
├── apache2.conf
│   ├── ports.conf
├── mods-enabled
│   ├── *.Load
│   └── *.conf
├── conf-enabled
│   ├── *.conf
├── sites-enabled
│   ├── *.conf
└── sites-available
    └── *.conf
```

- `apache2.conf` is the main configuration file. It puts the pieces together by including all remaining configuration files when starting up the web server.
- `ports.conf` is always included from the main configuration file. It is used to determine the listening ports for incoming connections, and this file can be customized anytime.
- Configuration files in the `mods-enabled/`, `conf-enabled/` and `sites-enabled/` directories contain particular configuration snippets which manage modules, global configuration fragments, or virtual host configurations respectively.



Welcome to nginx!

If you see this page, the nginx web server is successfully installed and working. Further configuration is required.

For online documentation and support please refer to nginx.org.
Commercial support is available at nginx.com.

Thank you for using nginx.



WELCOME TO THE BROWSER -----BY VAIBHAV VERMA(Cloud Computing)