

## Module-2: EC2 Assignment - 1

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You have been asked to:

1. Create an Instance in us-east-1 (N. Virginia) region with anUbuntu OS and install Nginx for making them web servers
2. Change the default website with a hello world page

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#Home:

New EC2 Experience Tell us what you think

EC2 Dashboard

EC2 Global View

Events

Tags

Limits

Instances

- Instances New
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances New
- Dedicated Hosts
- Scheduled Instances
- Capacity Reservations

Images

- AMIs New
- AMI Catalog

Elastic Block Store

- Volumes New
- Snapshots New
- Lifecycle Manager New

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

Resources

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running)	0	Dedicated Hosts	0	Elastic IPs	0
Instances	0	Key pairs	1	Load balancers	0
Placement groups	0	Security groups	4	Snapshots	0
Volumes	0				

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

**Launch instance**  
To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

**Service health** [AWS Health Dashboard](#)

Region	US East (N. Virginia)
Status	This service is operating normally

**Scheduled events**   
 US East (N. Virginia)  
No scheduled events

**Zones**

Zone name	Zone ID
us-east-1a	use1-az4

**Account attributes**

Supported platforms

- VPC

Default VPC

vpc-0b03f01cba75ff067

Settings

- EBS encryption
- Zones
- EC2 Serial Console
- Default credit specification
- Console experiments

**Explore AWS**

**Amazon GuardDuty Malware Protection**  
GuardDuty now provides agentless malware detection in Amazon EC2 & EC2 container workloads. [Learn more](#)

**Save up to 90% on EC2 with Spot Instances**  
Optimize price-performance by combining EC2 purchase options in a single EC2 ASG. [Learn more](#)

**Enable Best Price-Performance with AWS Graviton2**  
AWS Graviton2 powered EC2 instances enable up to 40% better price performance for a broad spectrum of cloud workloads. [Learn more](#)

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New EC2 Experience  
Tell us what you think



**EC2 Dashboard**

**EC2 Global View**

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Tags

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▼ Instances

Instances New

Instance Types

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Savings Plans

Reserved Instances New

Dedicated Hosts

Scheduled Instances

Capacity Reservations

▼ Images

AMIs New

AMI Catalog

▼ Elastic Block Store

Volumes New

Snapshots New

## Resources

**EC2 Global view**

You are using the following Amazon EC2 resources in the US East (N. Virginia) Region:

Instances (running) 0

Dedicated Hosts 0

Elastic IPs

Instances 0

Key pairs 1

Load balancers

Placement groups 0

Security groups 4

Snapshots

Volumes 0

Easily size, configure, and deploy Microsoft SQL Server Always On availability groups on AWS using the AWS Launch Wizard for SQL Server. [Learn more](#)

## Launch instance

To get started, launch an Amazon EC2 instance, which is a virtual server in the cloud.

**Launch instance**

Migrate a server

Launch instance

Launch instance from template

N. Virginia) Region

## Service health

AWS Health Dashboard

Region

US East (N. Virginia)

Status

This service is operating normally

## Zones

Zone name

us-east-1a

Zone ID

use1-az4

## Scheduled events

US East (N. Virginia)

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstances:

## 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  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 ...  [Browse more AMIs](#)

Including AMIs from AWS Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type  
ami-052efc3df9dad4825 (64-bit (x86)) / ami-070650c065ce4203 (64-bit (Arm))  
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Cancel 

### ▼ Summary

#### Number of instances Info

1

#### Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
ami-052efc3df9dad4825

#### 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.

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## Recents

## Quick Start



Browse more AMIs

Including AMIs from  
AWS, Marketplace and  
the Community

## Amazon Machine Image (AMI)

## Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

ami-052efd3df9dad4825 (64-bit (x86)) / ami-070650c005cce4203 (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

## Description

Canonical, Ubuntu, 22.04 LTS, amd64 jammy image build on 2022-06-09

## Architecture

## AMI ID

64-bit (x86)

ami-052efd3df9dad4825

▼ Instance type [Info](#)

## Instance type

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](#)

Cancel

[Launch Instance](#)

## ▼ Summary

Number of instances [Info](#)

1

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Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
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▼ Key pair (login) [Info](#)

← G H 🔍 https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstances:

aws Services

▼ Instance type [Info](#)

Instance type

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

t2.micro

▼ 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

Select

 Create new key pair

▼ Network settings [Get guidance](#)

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 group

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
ami-052efd3df9dad4825

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Cancel

**Launch instance**

Feedback

Looking for language selection? Find it in the new [Unified Settings](#)

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▼ 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

▼ Network settings Get guidance

Network interface

Associate with instance

Assign security group (optional) Select a security group or create a new one. You can't change the security group after you launch an instance. If you don't select a security group, your instance will be assigned to the default security group in any availability zone.

Tags

Please enter tags to identify your instance

Advanced options (optional) You can specify additional options for your instance, such as the instance type, volume type, and root volume size. You can also enable features like Amazon CloudWatch Metrics and CloudWatch Logs.

▼ Summary

## Create key pair

Key pairs allow you to connect to your instance securely.

Enter the name of the key pair below. When prompted, store the private key in a secure and accessible location on your computer. You will need it later to connect to your instance. [Learn more](#)

Key pair name

Vaibhav-Assignment

The name can include up to 255 ASCII characters. It can't include leading or trailing spaces.

Key pair type

RSA

RSA encrypted private and public key pair

ED25519

ED25519 encrypted private and public key pair (Not supported for Windows instances)

Private key file format

.pem

For use with OpenSSH

.ppk

For use with PuTTY

Cancel

Create key pair

https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#LaunchInstances:

aws Services Search for services, features, blogs, docs, and more [ALT+F]

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 group

**Common security groups [Info](#)**

Select security groups

default sg-0ecca16b46e70a9d X  
VPC: vpc-0b03f01cba75ff067

Security groups that you add or remove here will be added to or removed from all your network interfaces.

**Configure storage [Info](#)** Advanced

1x 8 GiB gp2 ▾ Root volume

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Add new volume

The selected AMI contains more instance store volumes than the instance allows. Only the first 0 instance store volumes from the AMI will be accessible from the instance

0 x File systems

Edit

Cancel

**Launch instance**

**Summary**

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 22.04 LTS, ...[read more](#)  
ami-052efd3df9dad4825

Virtual server type (instance type)

t2.micro

Firewall (security group)

default

Storage (volumes)

1 volume(s) - 8 GiB

ⓘ You've been opted into the new launch experience. [Find out more](#) about this experience or [send us feedback](#). You can still return to the previous version by opting-out.

[Opt out to the old experience](#)



EC2 > Instances > Launch an instance



Success

Successfully initiated launch of instance ([i-0d9470b1ec1ca59b1](#))

▶ [Launch log](#)

## Next Steps

### Get notified of estimated charges

[Create billing alerts](#) to get an email notification when estimated charges on your AWS bill exceed an amount you define (for example, if you exceed the free usage tier)

### How to connect to your instance

Your instance is launching and it might be a few minutes until it is in the running state, when it will be ready for you to use

Click [View Instances](#) to monitor your instance's status. Once your instance is in the 'running' state, you can connect to it from the Instances screen. Find out [how to connect to your instance](#)

[View more resources to get you started](#)

[View all instances](#)

Instances (1/1) <a href="#">Info</a>										
<input checked="" type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Public IPv4 ...	Actions
<input checked="" type="checkbox"/>	Vaibhav-Ubuntu	i-0d9470b1ec1ca59b1	<span>Running</span>	t2.micro	<span>2/2 checks passed</span>	No alarms	+ us-east-1d	ec2-54-86-2-98.compute...	54.86.2.98	<a href="#">Launch instances</a>

## Instance: i-0d9470b1ec1ca59b1 (Vaibhav-Ubuntu)

[Details](#) [Security](#) [Networking](#) [Storage](#) [Status checks](#) [Monitoring](#) [Tags](#)

▼ Instance summary [Info](#)

Instance ID

[i-0d9470b1ec1ca59b1 \(Vaibhav-Ubuntu\)](#)

Public IPv4 address

[54.86.2.98 | open address](#)

Private IPv4 addresses

[172.31.94.222](#)

IPv6 address

Instance state

Running

Public IPv4 DNS

[ec2-54-86-2-98.compute-1.amazonaws.com | open address](#)

Hostname type

IP name: ip-172-31-94-222.ec2.internal

Private IP DNS name (IPv4 only)

[ip-172-31-94-222.ec2.internal](#)

Elastic IP addresses

Answer private resource DNS name

IPv4 (A)

Instance type

t2.micro

Auto-assigned IP address

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

VPC ID

[vpc-0b03f01cba75ff067](#)

AWS Compute Optimizer finding

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

[Learn more](#)

IAM Role

Subnet ID

[subnet-0106a519f599ab40d](#)

Auto Scaling Group name

## Session settings



Telnet

Rsh

Xdmcp

RDP

VNC

FTP

SFTP

Serial

File

Shell

Browser

Mosh

Aws S3

WSL

### Basic SSH settings

Remote host \* 54.86.2.98

 Specify username

ubuntu

Port 22<sup>3</sup>  

### 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\Vaibh

 Adapt locales on remote server

Execute macro at session start: &lt;none&gt;

 OK Cancel

54.86.2.98 (ubuntu)

Terminal Sessions View X server Tools Games Settings Macros Help



Session



Servers



Tools



Games



Sessions



View



Split



MultiExec



Tunneling



Packages



Settings



Help

Quick connect...



2. 54.86.2.98 (ubuntu)

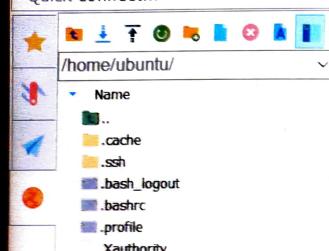


/home/ubuntu/

- Name ..
- .cache
- .ssh
- .bash\_logout
- .bashrc
- .profile
- Xauthority

root@ip-172-31-94-222:/home/ubuntu# apt-get install nginx -y

Quick connect...



```
2 54.86.2.98 (ubuntu) x [2] 54.86.2.98 (ubuntu)

Unpacking nginx-core (1.18.0-6ubuntu14.1) ...
Selecting previously unselected package nginx.
Preparing to unpack .../19-nginx_1.18.0-6ubuntu14.1_amd64.deb ...
Unpacking nginx (1.18.0-6ubuntu14.1) ...
Setting up libxpm4:amd64 (1:3.5.12-1build2) ...
Setting up libdeflate0:amd64 (1.10-2) ...
Setting up nginx-common (1.18.0-6ubuntu14.1) ...
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 (1.18.0-6ubuntu14.1) ...
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 (1.18.0-6ubuntu14.1) ...
Setting up libjpeg8:amd64 (8c-2ubuntu10) ...
Setting up libnginx-mod-mail (1.18.0-6ubuntu14.1) ...
Setting up fontconfig-config (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream (1.18.0-6ubuntu14.1) ...
Setting up libtiff5:amd64 (4.3.0-6) ...
Setting up libfontconfig1:amd64 (2.13.1-4.2ubuntu5) ...
Setting up libnginx-mod-stream-geoip2 (1.18.0-6ubuntu14.1) ...
Setting up libgd3:amd64 (2.3.0-2ubuntu2) ...
Setting up libnginx-mod-http-image-filter (1.18.0-6ubuntu14.1) ...
Setting up nginx-core (1.18.0-6ubuntu14.1) ...
 * Upgrading binary nginx
Setting up nginx (1.18.0-6ubuntu14.1) ...
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) ...
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.
root@ip-172-31-94-222:/home/ubuntu#
```

 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.

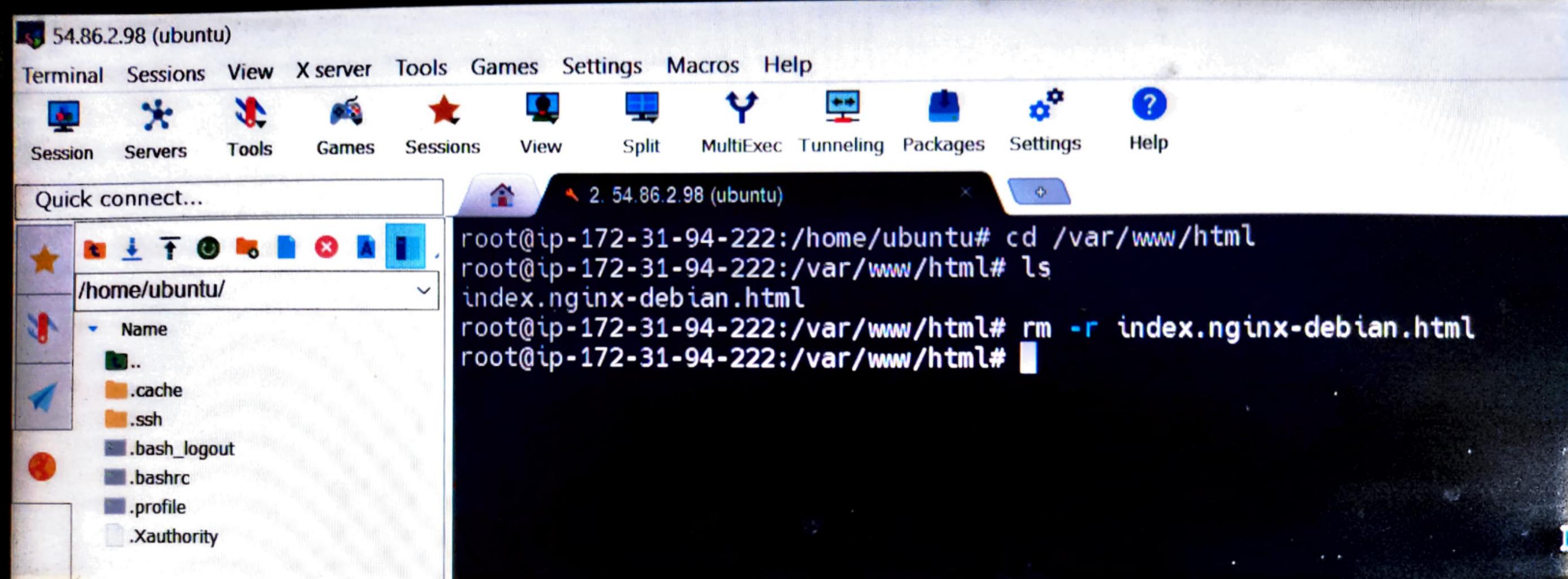
For online documentation and support please refer to [nginx.org](http://nginx.org).  
Commercial support is available at [nginx.com](http://nginx.com).

*Thank you for using nginx.*



Type here to search





54.86.2.98 (ubuntu)

Terminal Sessions View X server Tools Games Settings Macros Help



Session



Servers



Tools



Games



Sessions



View



Split



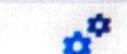
MultiExec



Tunneling



Packages



Settings



Help

Quick connect...



2. 54.86.2.98 (ubuntu)



/home/ubuntu/



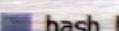
Name



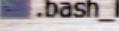
..



.cache



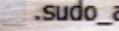
.ssh



.bash\_history



.bash\_logout



.bashrc



.profile



.sudo\_as\_admin\_successful



.Xauthority

```
root@ip-172-31-94-222:~# cd /var/www/html
```

```
root@ip-172-31-94-222:/var/www/html# ls
```

```
index.html
```

```
root@ip-172-31-94-222:/var/www/html# echo "HELLO WORLD -BY Vaibhav Verma" >index.html
```

```
root@ip-172-31-94-222:/var/www/html#
```



⚠ Not secure | 54.86.2.98

HELLO WORLD -BY Vaibhav Verma