

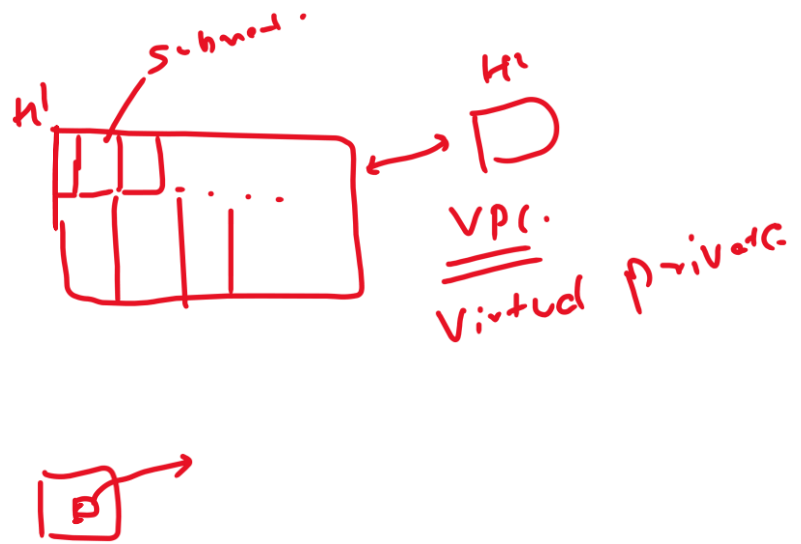
VPC practical

Create vpc

Launch vm under vpc

Install docker | nginx : 80

Access from outside.



Search vpc

The screenshot shows the AWS VPC dashboard. The sidebar on the left contains navigation links for 'Virtual private cloud' (Your VPCs, Subnets, Route tables, Internet gateways, Egress-only internet gateways, DHCP option sets, Elastic IPs, Managed prefix lists, NAT gateways, Peering connections) and 'Security'. The main content area has buttons for 'Create VPC' and 'Launch EC2 Instances'. Below these, a note states: 'Note: Your Instances will launch in the Asia Pacific region.' The 'Resources by Region' section shows the following resources in the Mumbai region:

Resource Type	Count
VPCs	1
Subnets	3
Route Tables	1
Internet Gateways	1

VPC settings

Resources to create [Info](#)

Create only the VPC resource or the VPC and other networking resources.

☒ VPC only

☐ VPC and more

Name tag - *optional*

Creates a tag with a key of 'Name' and a value that you specify.

my-vpc-1

IPv4 CIDR block [Info](#)

☒ IPv4 CIDR manual input

☐ IPAM-allocated IPv4 CIDR block

IPv4 CIDR

10.0.0.0/24

CIDR block size must be between /16 and /28.

IPv6 CIDR block [Info](#)

☒ No IPv6 CIDR block

☐ IPAM-allocated IPv6 CIDR block

☐ Amazon-provided IPv6 CIDR block

☐ IPv6 CIDR owned by me

Tenancy [Info](#)

Default

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search and filter your resources or

Key

Q Name



Value - *optional*

Q my-vpc-1



Remove tag

Add tag

You can add 49 more tags

Go to subnet

Subnet settings

Specify the CIDR blocks and Availability Zone for the subnet.

Subnet 1 of 1

Subnet name

Create a tag with a key of 'Name' and a value that you specify.

my-subnet-1

The name can be up to 256 characters long.

Availability Zone [Info](#)

Choose the zone in which your subnet will reside, or let Amazon choose one for you.

Asia Pacific (Mumbai) / ap-south-1a

IPv4 VPC CIDR block [Info](#)

Choose the VPC's IPv4 CIDR block for the subnet. The subnet's IPv4 CIDR must lie within this block.

10.0.0.0/24

IPv4 subnet CIDR block

10.0.0.0/25

< > ^ v

▼ **Tags - optional**

Key	Value - optional
<div>Q Name</div>	<div>Q my-subnet-1</div>

Add new tag

You can add 49 more tags.

Remove

Go to internet gateway

ys > igw-0f203b749946aace1

The following internet gateway was created: igw-0f203b749946aace1 - ig1. You can now attach to a VPC to enable the VPC to communicate with the internet.

igw-0f203b749946aace1 / ig1

Details [Info](#)

Internet gateway ID	State	VPC ID
<div>igw-0f203b749946aace1</div>	<div>Detached</div>	<div>-</div>

Tags

Q Search tags

Key	Value
Name	ig1

Then from right hand side attach ig.

Attach to VPC (igw-0f203b749946aace1) [Info](#)

VPC

Attach an internet gateway to a VPC to enable the VPC to communicate with the internet. Specify t

Available VPCs

Attach the internet gateway to this VPC.

► AWS Command Line Interface command

Create route table

Create route table [Info](#)

A route table specifies how packets are forwarded between the subnets within your VPC, the internet, and your VPN connection.

Route table settings

Name - *optional*

Create a tag with a key of 'Name' and a value that you specify.

VPC

The VPC to use for this route table.

Tags

A tag is a label that you assign to an AWS resource. Each tag consists of a key and an optional value. You can use tags to search ar

Key

Value - *optional*

[Add new tag](#)

You can add 49 more tags.

Go to edit route

Edit routes

Destination

10.0.0.0/24

Q

0.0.0.0/0

X

Target

local

Q localX

Internet Gateway

Q igw-0F203b749946aace1X

Status

Active

Propagated

No

Route Origin

CreateRouteTable

Add route

Cancel

Preview

Save changes

Go to subnet association and select subnet and associate.

PC > Route tables > rtb-06ecca29099716540 > Edit subnet associations

Edit subnet associations

Change which subnets are associated with this route table.

Available subnets (1/1)

Filter subnet associations

my-subnet-1

subnet-0bd47cf8f55ee1b7d

10.0.0.0/25

-

Main (rtb-0138)

Selected subnets

subnet-0bd47cf8f55ee1b7d / my-subnet-1 X

Cancel

Save associations

Go to ec2 instance

It seems like you may be new to launching instances in EC2. Take a walkthrough to learn about EC2, how to launch instances and troubleshoot practices.

Take a walkthrough

Do not show me this message again.

Launch an instance

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

Name

webserver-nginx

Add additional tags

Application and OS Images (Amazon Machine Image)

An AMI contains the operating system, application server, and applications for your instance. If you don't see a suitable AMI below, use the search field or choose [Browse more AMIs](#).

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

Recents

Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

SUSE Linux

SUSE

Debian

debian

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Amazon Linux 2023 kernel-5.1 AMI
ami-086114e7b8f5069dd (64-bit (x86), uefi-preferred) / ami-0fad8318b9405c6fb (64-bit (Arm), uefi)
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Summary

Number of instances

1

Software Image (AMI)

Amazon Linux 2023 AMI 2023.8.2...[read more](#)
ami-086114e7b8f5069dd

Virtual server type (instance type)

t3.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

Cancel

Launch instance

Preview code

connect

Connect [Info](#)

Connect to an instance using the browser-based client.

EC2 Instance Connect

Session Manager

SSH client

EC2 serial console

Instance ID

1-0985dea9f3bbfc6cf

(webserver-nginx)

1. Open an SSH client.

2. Locate your private key file. The key used to launch this instance is server1.pem

3. Run this command, if necessary, to ensure your key is not publicly viewable.

chmod 400 "server1.pem"

4. Connect to your instance using its Public IP:

3.6.37.249

Example:

ssh -i "server1.pem" ec2-user@3.6.37.249

Note:

In most cases, the guessed username is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

Cancel

After connection login

[illegible]

Become root user

```
Microsoft Windows [Version 10.0.26100.4946]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sande>cd downloads

C:\Users\sande\Downloads>ssh -i "server1.pem" ec2-user@3.6.37.249
The authenticity of host '3.6.37.249 (3.6.37.249)' can't be established.
ED25519 key fingerprint is SHA256:4EQHeQmjtehr7nbSJ0YWi4UWaX9qiCSAmw5PdsMP3uE.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added '3.6.37.249' (ED25519) to the list of known hosts.

      #_
     _/ \_ #####_      Amazon Linux 2023
    _/ \_ #####\_
   _/ \_ \###|
  _/ \_ \#/ _-- https://aws.amazon.com/linux/amazon-linux-2023
 _/ \_ V~' ' ->
    _/ \_ /
   _/ \_ /
  _/ \_ /
 _/ \_ /
_/_/ \_ /

[ec2-user@ip-10-0-0-102 ~]$ yum install docker -y
Error: This command has to be run with superuser privileges (under the root user on most systems).
[ec2-user@ip-10-0-0-102 ~]$ sudo su
[root@ip-10-0-0-102 ec2-user]# |
```

Yum install docker -y

Yum install nginx -y

```
      #_
     _/ \_ #####_      Amazon Linux 2023
    _/ \_ #####\_
   _/ \_ \###|
  _/ \_ \#/ _-- https://aws.amazon.com/linux/amazon-linux-2023
 _/ \_ V~' ' ->
    _/ \_ /
   _/ \_ /
  _/ \_ /
 _/ \_ /
_/_/ \_ /

[ec2-user@ip-10-0-0-102 ~]$ yum install docker -y
Error: This command has to be run with superuser privileges (under the
[ec2-user@ip-10-0-0-102 ~]$ sudo su
[root@ip-10-0-0-102 ec2-user]# yum install dcoker -y
|
```

Yum install docker -y

Nginx :80

Start docker and nginx

Yum start nginx

Yum enable nginx

```
Verifying : nginx-mimetypes-2.1.49-3.amzn2023.0.3.noarch
Installed:
  generic-logos-httpd-18.0.0-12.amzn2023.0.3.noarch      gperftoc
  nginx-core-1:1.28.0-1.amzn2023.0.2.x86_64             nginx-fa

Complete!
[root@ip-10-0-0-102 ec2-user]# systemctl start nginx
[root@ip-10-0-0-102 ec2-user]# systemctl start docker
[root@ip-10-0-0-102 ec2-user]# |
```

Go to ec2 dashboard and then click on public ip.



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.