

# Oracle Cloud Web Server

Create vm in oracal

The screenshot shows the 'Create compute instance' page in the Oracle Cloud console. The browser address bar shows 'cloud.oracle.com/compute/instances/create?region=ap-mumbai-1'. The page title is 'Create compute instance'. Below the title, there is a progress indicator for '1 Basic information'. The main content area has a heading 'Create an instance to deploy and run applications, or save as a reusable Terraform stack for creating an instance with Resource Manager.' Below this, there are two input fields: 'Name' with the value 'Ubuntu Server' and 'Create in compartment' with the value 'eshanmanisha (root)'. Below these fields, there is a section titled 'Placement' with the text 'The availability domain helps determine which shapes are available.' At the bottom of the page, there is a progress bar showing 'Tasks Completed 0 of 4', a 'Cancel' button, a 'View estimated cost' button, a 'Previous' button, and a 'Next' button. The footer contains links for 'Terms of Use and Privacy', 'Cookie Preferences', 'Copyright © 2025, Oracle and/or its affiliates. All rights reserved.', and a 'Give us feedback' link.

cloud.oracle.com/compute/instances/create?region=ap-mumbai-1

Cloud

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India West (Mumbai)

## Create compute instance

1 Basic information

Create an instance to deploy and run applications, or save as a reusable Terraform stack for creating an instance with Resource Manager.

Name  
Ubuntu Server

Create in compartment  
eshanmanisha (root)

### Placement

The availability domain helps determine which shapes are available.

Tasks Completed 0 of 4

Cancel View estimated cost Previous Next

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The screenshot shows the 'Select an image' page in the Oracle Cloud console. The browser address bar shows 'cloud.oracle.com/compute/instances/create?region=ap-mumbai-1'. The page title is 'Select an image'. On the left side, there is a sidebar with a progress indicator for '1 Basic information'. The sidebar has a section titled 'Image' with a 'Change image' button. Below this, there is a section titled 'Operating system' with a large red oval icon. Below that, there is a section titled 'Image build' and a section titled 'Security'. At the bottom of the sidebar, there is a progress bar showing 'Tasks Completed 0 of 4'. The main content area has a heading 'Select an image'. Below this, there is a grid of image options: Oracle Linux, Ubuntu (selected), Red Hat, CentOS, Windows, AlmaLinux, Rocky Linux, and Marketplace. At the bottom of the page, there is a progress bar showing 'Tasks Completed 0 of 4', a 'Cancel' button, and a 'Select image' button. The footer contains links for 'Terms of Use and Privacy', 'Cookie Preferences', 'Copyright © 2025, Oracle and/or its affiliates. All rights reserved.', and a 'Give us feedback' link.

cloud.oracle.com/compute/instances/create?region=ap-mumbai-1

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## Select an image

1 Basic information

A [shape](#) is a template that determines the hardware configuration of your instance.

### Image

Change image

### Operating system

### Image build

### Security

Tasks Completed 0 of 4

Oracle Linux Ubuntu Red Hat CentOS

Windows AlmaLinux Rocky Linux Marketplace

Cancel Select image

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1 Basic information

Operating system

Image build

Security

Shape

Change shape

Tasks Completed 0 of 4

### Browse all shapes

**Virtual machine**

A virtual machine is an independent computing environment that runs on top of physical bare metal hardware.

**Bare metal machine**

A bare metal compute instance gives you dedicated physical server access for highest performance and strong isolation.

**Shape series**

**AMD**

Flexible OCPU count. Current generation AMD processors.

**Intel**

Flexible OCPU count. Current generation Intel processors.

**Ampere**

Arm-based processor.

**Specialty and previous generation**

Always Free, Dense I/O, GPU, HPC, Generic, and earlier generation AMD and Intel standard shapes.

Cancel

Select shape

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← Instances

**Ubuntu Server** Running

Instance details

Actions Start

Details

Networking

Storage

Security

Management

OS Management

Monitoring

Work requests

Tags

### General information

Availability domain	AD-1
Fault domain	FD-3
Region	ap-mumbai-1
OCID	...6lrp3tkiczngrwz4pskcm15rbcyqcw5cpelg6or3w6trfmz04mwfa <span>Copy</span>
Launched	Jul 04, 2025, 16:03:31 UTC
Compartment	eshanmanisha (root)
Capacity type	On-demand

### Launch options

NIC attachment type	PARAVIRTUALIZED
Remote data volume	PARAVIRTUALIZED
Firmware	UEFI_64
Boot volume type	PARAVIRTUALIZED
In-transit encryption	Enabled
Secure Boot	Disabled
Measured Boot	Disabled
Trusted Platform Module	Disabled
Confidential computing	Disabled

**Instance access**

You connect to a running Linux instance using a Secure Shell (SSH) connection. You'll need the private key from the

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```
ubuntu@ubuntu-server: ~  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS C:\Users\Star Gate> ssh -i "C:\Users\Star Gate\Desktop\project\cloud\key\ssh-key-2025-07-04.key" ubuntu@80.225.237.152  
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.0-1025-oracle aarch64)  
  
 * Documentation:  https://help.ubuntu.com  
 * Management:    https://landscape.canonical.com  
 * Support:       https://ubuntu.com/pro  
  
System information as of Fri Jul  4 18:33:54 UTC 2025  
  
System load:  0.0      Processes:            162  
Usage of /:   4.6% of 44.96GB   Users logged in:     0  
Memory usage: 3%      IPv4 address for enp0s6: 10.0.0.56  
Swap usage:   0%  
  
Expanded Security Maintenance for Applications is not enabled.  
  
69 updates can be applied immediately.  
59 of these updates are standard security updates.  
To see these additional updates run: apt list --upgradable  
  
Enable ESM Apps to receive additional future security updates.  
See https://ubuntu.com/esm or run: sudo pro status  
  
New release '24.04.2 LTS' available.  
Run 'do-release-upgrade' to upgrade to it.  
  
Last login: Fri Jul  4 18:33:54 2025 from 192.248.2.10  
ubuntu@ubuntu-server:~$
```

```
ssh -i ~/Desktop/project/cloud/key/ssh-key-2025-07-04.key ubuntu@80.225.237.152
```

# Docker Installation Guide for Ubuntu 22.04 LTS

## 1. Update package list and install prerequisites

```
sudo apt update  
sudo apt install -y ca-certificates curl gnupg
```

- Updates the local list of packages
- Installs tools for secure downloads and package verification

## 2. Add Docker's official GPG key

```
sudo install -m 0755 -d /etc/apt/keyrings  
curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o  
/etc/apt/keyrings/docker.gpg  
sudo chmod a+r /etc/apt/keyrings/docker.gpg
```

- Downloads and stores Docker's secure GPG key

## 3. Set up Docker repository

```
echo \  
"deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg] \  
https://download.docker.com/linux/ubuntu \  
$(. /etc/os-release && echo "$VERSION_CODENAME") stable" | \  
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
```

- Adds Docker's official repository to your APT sources

## 4. Update the package index

```
sudo apt update
```

- Includes Docker repository in package searches

## 5. Install Docker Engine and plugins

```
sudo apt install -y docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin
```

- Installs Docker Engine, CLI, and useful plugins

## 6. Test Docker installation

```
sudo docker run hello-world
```

- Runs a test container to verify Docker is working

## 7. (Optional) Run Docker without sudo

```
sudo usermod -aG docker $USER  
newgrp docker
```

- Lets your user run Docker without sudo

# portainer

```
ubuntu@ubuntu-server:~$ sudo docker run -d -p 8000:8000 -p 9443:9443 --name portainer --restart=always -v /var/run/docker.sock:/var/run/docker.sock -v portainer_data:/data portainer/portainer-ce:latest
Unable to find image 'portainer/portainer-ce:latest' locally
latest: Pulling from portainer/portainer-ce
63c930229559: Pull complete
d3b1c06ebf8c: Pull complete
354e5ce52559: Pull complete
8d59d73e40c6: Pull complete
e811f1a0940a: Pull complete
605b6f3b7115: Pull complete
24f6f070c2a7: Pull complete
60aae008ce70: Pull complete
71eec8d28aa8: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:224a378fbc5ae579dc0d570c5ca2e5e981a4a003c8d7c2c5b5e482af97c2f87c
Status: Downloaded newer image for portainer/portainer-ce:latest
c278cbc9732c5dfab659494e2cfb20684e6cb75a1539c05b904c3c5110a781a2
```

sudo docker volume create portainer\_data

```
sudo docker run -d -p 8000:8000 -p 9443:9443 \
--name portainer \
--restart=always \
-v /var/run/docker.sock:/var/run/docker.sock \
-v portainer_data:/data \
portainer/portainer-ce:latest
```

# Set Port

The screenshot shows the Oracle Cloud Networking console. On the left, the 'Networking' sidebar is visible with options like 'Overview', 'Virtual cloud networks', 'Web Application Acceleration', 'Load balancers', 'DNS management', 'Customer connectivity', 'Cluster Placement Groups', 'IP management', and 'Network Command Center'. The main area displays 'Ingress Rules' under the 'Security rules' tab. A table lists five rules, with the last one highlighted: 'No', '0.0.0.0/0', 'TCP', 'All', '9443', and 'TCP traffic for ports: 9443'. Below the table, there are navigation controls and a search bar for 'Egress Rules'.

	Stateless	Source	IP Protocol	Source Port Range	Destination Port Range	Type and Code	Allows
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	22		TCP traffic for ports: 22 SSH Remote Login Protocol
<input type="checkbox"/>	No	0.0.0.0/0	ICMP			3, 4	ICMP traffic for: 3, 4 Destination Unreachable: Fragmentation Needed and Don't
<input type="checkbox"/>	No	10.0.0.0/16	ICMP			3	ICMP traffic for: 3 Destination Unreachable
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	80		TCP traffic for ports: 80
<input type="checkbox"/>	No	0.0.0.0/0	TCP	All	9443		TCP traffic for ports: 9443

## sudo docker ps

```
ubuntu@ubuntu-server:~$ sudo docker ps
CONTAINER ID   IMAGE                                COMMAND                  CREATED        STATUS        PORTS
e278cbc9732c   portainer/portainer-ce:latest       "/portainer"            3 minutes ago Up 3 minutes  0.0.0.0:8000->8000/tcp, [::]:8000->8000/tcp, 0.0.0.0:9443->9443/tcp, [::]:9443->9443/tcp, 9000/tcp
tcp portainer
```

The screenshot shows the 'New Portainer installation' screen in a web browser. The URL is 'https://80.225.237.152:9443/#/init/admin'. The page prompts the user to 'Please create the initial administrator user.' There are three input fields: 'Username' with the value 'admin', 'Password' with masked characters, and 'Confirm password' with masked characters and a green checkmark. Below the fields, a message states 'The password must be at least 12 characters long.' with a green checkmark. A 'Create user' button is visible. At the bottom, there is a checkbox for 'Allow collection of anonymous statistics' which is checked, and a link to the 'privacy policy'. A 'Restore Portainer from backup' option is also present at the bottom.

## Upload a file to Ubuntu server

```
ubuntu@ubuntu-server: ~  
ubuntu@ubuntu-server:~$ sudo apt update  
sudo apt install unzip -y  
Hit:1 https://download.docker.com/linux/ubuntu jammy InRelease  
Get:2 http://ports.ubuntu.com/ubuntu-ports jammy-security InRelease [129 kB]  
Hit:3 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy InRelease  
Get:4 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy-updates InRelease [128 kB]  
Get:5 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy-backports InRelease [127 kB]  
Get:6 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy-updates/main arm64 Packages [2495 kB]  
34% [6 Packages 355 kB/2495 kB 14%]
```

```
Windows PowerShell  
Windows PowerShell  
Copyright (C) Microsoft Corporation. All rights reserved.  
  
Try the new cross-platform PowerShell https://aka.ms/pscore6  
  
PS C:\Users\Star Gate> scp -i "C:\Users\Star Gate\Desktop\project\cloud\key\ssh-key-2025-07-04.key" ^  
>> "C:\Users\Star Gate\Desktop\New folder (30)\eshan_portfolio_fixed.zip" ^  
>> ubuntu@80.225.237.152:/home/ubuntu/  
eshan_portfolio_fixed.zip 100% 34MB 9.3MB/s 00:03  
PS C:\Users\Star Gate>
```



```
ubuntu@ubuntu-server: ~$ unzip eshan_portfolio_fixed.zip -d portfolio
Archive:  eshan_portfolio_fixed.zip
  creating: portfolio/assets/
  inflating: portfolio/contact.html
  inflating: portfolio/index.html
  inflating: portfolio/projects.html
  inflating: portfolio/script.js
  inflating: portfolio/script1.js
  inflating: portfolio/skills.html
  inflating: portfolio/style.css
  inflating: portfolio/style1.css
  inflating: portfolio/about.html
  creating: portfolio/assets/downloads/
  creating: portfolio/assets/images/
  inflating: portfolio/assets/eshan_cv.pdf
  inflating: portfolio/assets/downloads/cisco-lab.pdf
  inflating: portfolio/assets/downloads/cloud-lab.pdf
  inflating: portfolio/assets/downloads/elk-monitoring.pdf
  inflating: portfolio/assets/downloads/iot-pet.pdf
  inflating: portfolio/assets/downloads/project2.pdf
  inflating: portfolio/assets/downloads/smb-hack.pdf
  inflating: portfolio/assets/downloads/tailscale-vpn.pdf
  inflating: portfolio/assets/downloads/truenas.pdf
  inflating: portfolio/assets/downloads/virtual-lab.pdf
  inflating: portfolio/assets/downloads/wireguard-azure.pdf
  inflating: portfolio/assets/images/Azure.png
  inflating: portfolio/assets/images/C.png
  inflating: portfolio/assets/images/cisco-lab.png
  inflating: portfolio/assets/images/cisco.png
  inflating: portfolio/assets/images/cloud-lab.png
  inflating: portfolio/assets/images/CSS.png
  inflating: portfolio/assets/images/docker.png
  inflating: portfolio/assets/images/elk-monitoring.png
  inflating: portfolio/assets/images/elk.png
  inflating: portfolio/assets/images/eshan-profile.png
  inflating: portfolio/assets/images/esxi.png
  inflating: portfolio/assets/images/eternalblue.png
  inflating: portfolio/assets/images/Firebase.png
  inflating: portfolio/assets/images/Flutter.png
  inflating: portfolio/assets/images/Fortinet.png
  inflating: portfolio/assets/images/HTML.png
  inflating: portfolio/assets/images/iot-pet.png
  inflating: portfolio/assets/images/Java.png
  inflating: portfolio/assets/images/JavaScript.png
  inflating: portfolio/assets/images/K3s.png
  inflating: portfolio/assets/images/MySQL.png
  inflating: portfolio/assets/images/ollama.png
  inflating: portfolio/assets/images/Oracle.png
  inflating: portfolio/assets/images/paloalto.jpeg
  inflating: portfolio/assets/images/paloalto.png
```

```
ubuntu@ubuntu-server: ~/portfolio
ubuntu@ubuntu-server: ~/portfolio$
```

## Created Docker Network

```
Select ubuntu@ubuntu-server: ~ FPS N/A | GPU 9% | CPU 15% | LAT N/A
ubuntu@ubuntu-server:~$ docker network create webnet
77f36d5bd71d0ee458e6a98b944c27982fca9f5c7cd6cc52e37913479bd282be
ubuntu@ubuntu-server:~$ docker rm -f portfolio-site
portfolio-site
ubuntu@ubuntu-server:~$ docker run -d \
> --name portfolio-site \
> --network webnet \
> -p 8080:80 \
> eshan-portfolio:latest
577c9c56c1c08c5091d27a5681940406218b7cd35984a40d9820190e5ae539bb9
ubuntu@ubuntu-server:~$ docker rm -f nginx-web
~/nginx-conf/default.conf:/etc/nginx/conf.d/default.conf \
-v certbot-etc:/etc/letsencrypt \
nginx:latest
nginx-web
ubuntu@ubuntu-server:~$ docker run -d \
> --name nginx-web \
> --network webnet \
> -p 80:80 -p 443:443 \
> -v ~/nginx-conf/default.conf:/etc/nginx/conf.d/default.conf \
> -v certbot-etc:/etc/letsencrypt \
> nginx:latest
bd1e175a846f99625e6f1af02b15ea763328f996267d64ac7a051dca70cef9c1
ubuntu@ubuntu-server:~$
```

### 1.Created a Shared Room

`docker network create webnet`

This created a new *custom bridge network* (room) called webnet.

### 2.Recreated Both People Inside the Same Room

**Portfolio Site:**

```
docker run -d \
--name portfolio-site \
--network webnet \
-p 8080:80 \
eshan-portfolio:latest
```

**Nginx Web:**

```
docker run -d \
--name nginx-web \
--network webnet \
-p 80:80 -p 443:443 \
-v ... \
nginx:latest
```

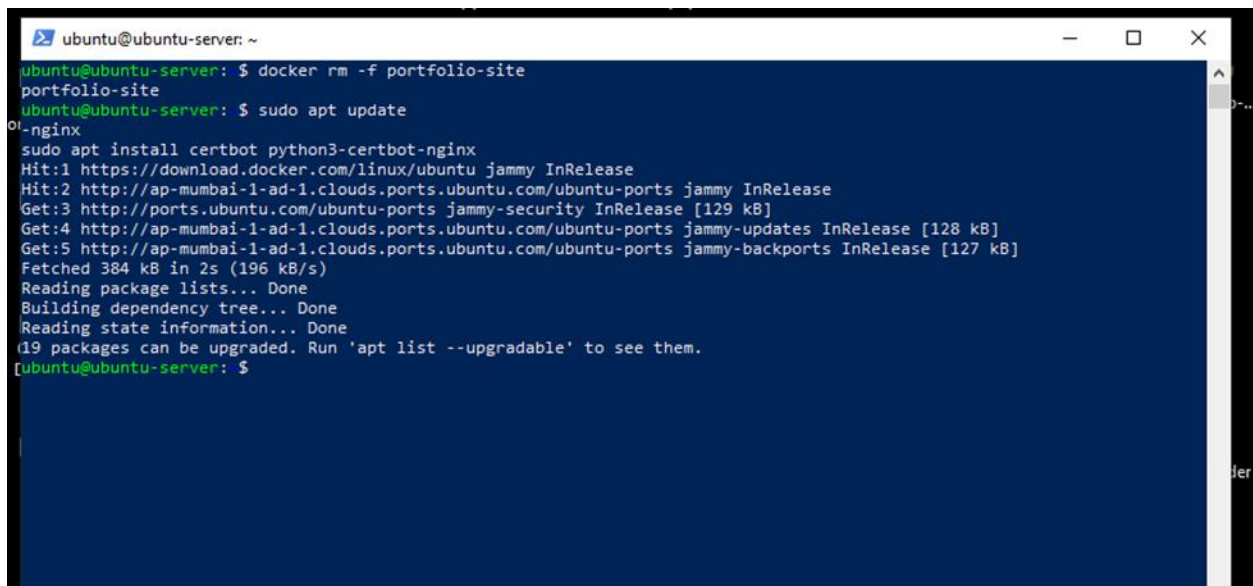
**SSL certificates**

This holds your SSL certificates:

`docker volume create certbot-etc`

Make sure port 80 is open and Nginx is running:

```
docker run --rm -it \
-v certbot-etc:/etc/letsencrypt \
-v /var/lib/letsencrypt:/var/lib/letsencrypt \
-v /var/www/certbot:/var/www/certbot \
certbot/certbot certonly \
--webroot -w /var/www/certbot \
-d enet.giize.com \
--email your-email@gmail.com \
--agree-tos --no-eff-email
```

A terminal window titled 'ubuntu@ubuntu-server: ~' with standard window controls. The terminal shows a sequence of commands and their outputs. First, 'docker rm -f portfolio-site' is executed, returning 'portfolio-site'. Then, 'sudo apt update' is run, showing update progress for various Ubuntu repositories. Finally, 'sudo apt install certbot python3-certbot-nginx' is executed, showing the installation of certbot and its dependencies. The terminal output is as follows:

```
ubuntu@ubuntu-server: ~
ubuntu@ubuntu-server: $ docker rm -f portfolio-site
portfolio-site
ubuntu@ubuntu-server: $ sudo apt update
Hit:1 https://download.docker.com/linux/ubuntu jammy InRelease
Hit:2 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy InRelease
Get:3 http://ports.ubuntu.com/ubuntu-ports jammy-security InRelease [129 kB]
Get:4 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy-updates InRelease [128 kB]
Get:5 http://ap-mumbai-1-ad-1.clouds.ports.ubuntu.com/ubuntu-ports jammy-backports InRelease [127 kB]
Fetched 384 kB in 2s (196 kB/s)
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
19 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ubuntu-server: $
```

Update Nginx Config with SSL

ubuntu@ubuntu-server: ~/nginx-conf

```
GNU nano 6.2 default.conf
server {
    listen 80;
    server_name enet.giize.com;

    # Redirect all HTTP to HTTPS
    return 301 https://$host$request_uri;
}

server {
    listen 443 ssl;
    server_name enet.giize.com;

    ssl_certificate /etc/letsencrypt/live/enet.giize.com/fullchain.pem;
    ssl_certificate_key /etc/letsencrypt/live/enet.giize.com/privkey.pem;

    location / {
        proxy_pass http://portfolio-site:80;
        proxy_set_header Host $host;
        proxy_set_header X-Real-IP $remote_addr;
        proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
    }
}
```

[ Read 27 lines ]

<b>^G</b> Help	<b>^O</b> Write Out	<b>^W</b> Where Is	<b>^K</b> Cut	<b>^T</b> Execute	<b>^C</b> Location	<b>M-U</b> Undo	<b>M-A</b> Set Mark
<b>^X</b> Exit	<b>^R</b> Read File	<b>^N</b> Replace	<b>^U</b> Paste	<b>^J</b> Justify	<b>^_</b> Go To Line	<b>M-E</b> Redo	<b>M-C</b> Copy