

# Guía Completa: Instalación de Portainer CE y Moodle con Docker

## PARTE 1 - Instalación de Docker y Docker Compose

```
examen@UBUNTU-24-04: ~  
examen@UBUNTU-24-04:~$ sudo apt install -y docker.io docker-compose ca-certificates curl gnupg  
[sudo] contraseña para examen:  
Leyendo lista de paquetes... Hecho  
Creando árbol de dependencias... Hecho  
Leyendo la información de estado... Hecho  
ca-certificates ya está en su versión más reciente (20240203).  
fijado ca-certificates como instalado manualmente.  
Los paquetes indicados a continuación se instalaron de forma automática y ya no son necesarios.  
  libgl1-amd-gpu-dri libglapi-mesa libllvm17t64  
Utilice «sudo apt autoremove» para eliminarlos
```

```
examen@UBUNTU-24-04: ~  
examen@UBUNTU-24-04:~$ docker --version  
Docker version 28.2.2, build 28.2.2-0ubuntu1~24.04.1  
examen@UBUNTU-24-04:~$ docker-compose --version  
Docker Compose version v2.24.5  
examen@UBUNTU-24-04:~$ soy daniel
```

## PARTE 2 - Instalación de Portainer CE

```
examen@UBUNTU-24-04: ~  
examen@UBUNTU-24-04:~$ sudo docker volume create portainer_data  
portainer_data  
examen@UBUNTU-24-04:~$ soy daniel
```

## Paso 2.1: Verificar que Portainer está ejecutándose

```
examen@UBUNTU-24-04: ~$ sudo docker run -d \
  -p 9000:9000 \
  -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
22d4f45bf667: Pull complete
089b96337e3d: Pull complete
c551c6af3241: Pull complete
9f7772ceb88a: Pull complete
d35c85f36345: Pull complete
f3e139b9cd66: Pull complete
2d896f38a01e: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:d38a6876b61df32e4da13c0ca61cf2aa0f27afc103abb4ca7ad4
Status: Downloaded newer image for portainer/portainer-ce:latest
17da185b177d52bf92cd6e28d7f44ce4e3bdb6c6eba85238e9cbb675d43944e33
```

```
examen@UBUNTU-24-04: ~$ sudo docker ps
```

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS
17da185b177d	portainer/portainer-ce:latest	"/portainer"	47 seconds ago	Up 46 seconds
	0.0.0.0:9000->9000/tcp, [::]:9000->9000/tcp, 8000/tcp, 0.0.0.0:9443->9443/tcp, [::]:9443->9443/tcp	portainer		

```
examen@UBUNTU-24-04: ~$ soy daniel
```

PORTAINER.io

✓ New Portainer installation

Please create the initial administrator user.

Username

Password

Confirm password  ✗

⚠ The password must be at least 12 characters long.

Contraseña → AdminAdmin123

Container list

Containers  Start Stop Kill Restart Pause Resume Remove

<input type="checkbox"/>	Name ↓↑	State ↓↑	Filter	Quick Actions	Stack ↓↑	Image ↓↑	Created ↓↑
<input type="checkbox"/>	moodle-app	running			moodle-docker	jhardison/moodle:latest	2025-11-16 2
<input type="checkbox"/>	moodle-mariadb	healthy			moodle-docker	mariadb:10.11	2025-11-16 2
<input checked="" type="checkbox"/>	portainer	running			-	portainer/portainer-ce:latest	2025-11-16 2

Items per page

(Estos son los contenedores después de hacer el docker-compose up)

## 2.2 Creamos el .yaml con el contenido

```
root@UBUNTU-24-04: /home/examen/...
GNU nano 7.2 docker-compose.yml
Version: "3.8"

services:
  mariadb:
    image: mariadb:10.11
    container_name: moodle-mariadb
    restart: unless-stopped
    environment:
      MYSQL_ROOT_PASSWORD: superroot123
      MYSQL_DATABASE: moodle
      MYSQL_USER: moodleuser
      MYSQL_PASSWORD: moodle123
    volumes:
      - mariadb_data:/var/lib/mysql
    networks:
      - moodle-net
    command: >
      --character-set-server=utf8mb4
      --collation-server=utf8mb4_unicode_ci
      --default-authentication-plugin=mysql_native_password
      --innodb-file-format=Barracuda
      --innodb-file-per-table=1
      --innodb-large-prefix=1
    healthcheck:
      test: ["CMD", "mysqladmin", "ping", "-h", "localhost", "-u", "root", "-ps>
      interval: 10s
      timeout: 5s
      retries: 10

  moodle:
    image: jhardison/moodle:latest
    container_name: moodle-app
    restart: unless-stopped
    ports:
      - "8080:80"
    environment:
      DB_PORT_3306_TCP_ADDR: mariadb
      DB_PORT_3306_TCP_PORT: 3306
      DB_ENV_MYSQL_DATABASE: moodle
      DB_ENV_MYSQL_USER: moodleuser
      DB_ENV_MYSQL_PASSWORD: moodle123
      MOODLE_URL: http://192.168.33.115:8080
    depends_on:
      mariadb:
        condition: service_healthy
    volumes:
      - moodle_data:/var/www/html
      - moodledata:/var/moodledata

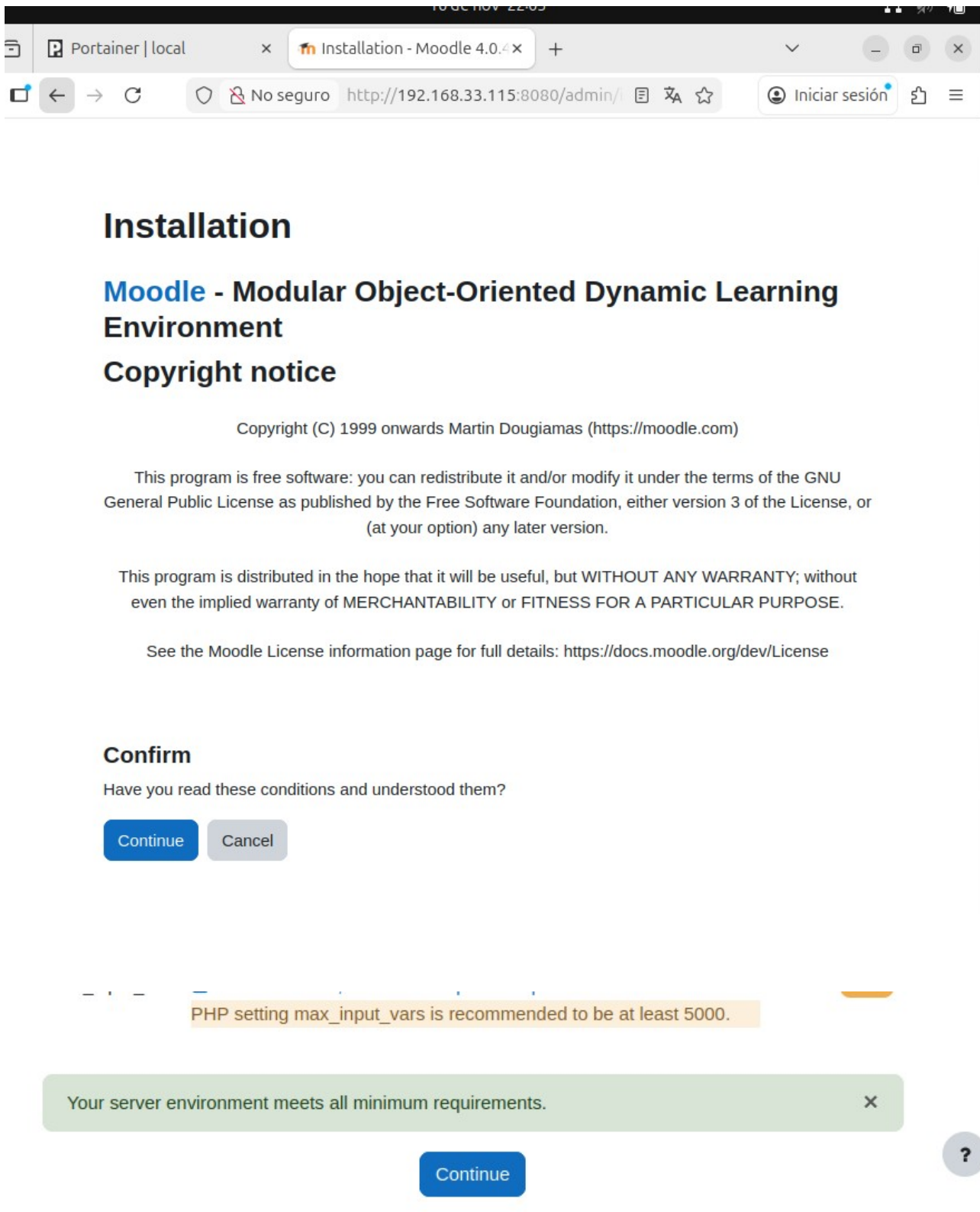
^G Ayuda ^O Guardar ^W Buscar ^K Cortar ^T Ejecutar ^C Ubicación
^X Salir ^R Leer fich ^\ Reemplazar ^U Pegar ^J Justificar ^_ Ir a línea
```

## 2.3 Descargamos las imagenes (en la practica he utilizado otras, por que me daba error)

```
root@UBUNTU-24-04: /home/examen/moodle-docker# docker images
REPOSITORY          TAG          IMAGE ID          CREATED          SIZE
portainer/portainer-ce  latest      aa2ac1fdb557     2 weeks ago     186MB
jhardison/moodle     latest      7520f108f7e4     3 years ago     723MB
root@UBUNTU-24-04: /home/examen/moodle-docker# docker pull mariadb:10.11
10.11: Pulling from library/mariadb
7e49dc6156b0: Downloading 12.06MB/29.54MB
9629f042e43d: Download complete
62c1a43ca7d9: Download complete
2540807a6100: Download complete
892acd9bdcf5: Download complete
9aa9032ee110: Downloading 3.748MB/71.13MB
96d7347ba317: Download complete
cffdfa9765de: Download complete
```

Containers <input type="text" value="Search.."/>						
<div><span>▶ Start</span> <span>□ Stop</span> <span>/ Kill</span> <span>↺ Restart</span> <span>⏸ Pause</span> <span>▶ Resume</span> <span>🗑 Remove</span></div>						
<input type="checkbox"/>	Name ↓↑	State ↓↑ <small>Filter ▼</small>	Quick Actions	Stack ↓↑	Image ↓↑	Created ↓↑
<input type="checkbox"/>	moodle-app	running		moodle-docker	jhardison/moodle:latest	2025-11-16 2
<input type="checkbox"/>	moodle-mariadb	healthy		moodle-docker	mariadb:10.11	2025-11-16 2
<input type="checkbox"/>	portainer	running		-	portainer/portainer-ce:latest	2025-11-16 2
Items per page						10 ▼

## PARTE 3 - Instalamos el Moodle



The screenshot shows a web browser window with the title "Installation - Moodle 4.0.4". The address bar shows the URL "http://192.168.33.115:8080/admin/". The page content includes the Moodle logo, the text "Moodle - Modular Object-Oriented Dynamic Learning Environment", and a "Copyright notice" section. The copyright notice states that the program is free software under the GNU General Public License. Below the notice, there is a "Confirm" section asking if the user has read the conditions and understood them. There are two buttons: "Continue" and "Cancel". At the bottom, there is a green message box stating "Your server environment meets all minimum requirements." and a "Continue" button. A small orange warning box above the green message box states "PHP setting max\_input\_vars is recommended to be at least 5000.".

Portainer | local x Installation - Moodle 4.0.4 x +

← → ↻ No seguro http://192.168.33.115:8080/admin/ Iniciar sesión

# Installation

## Moodle - Modular Object-Oriented Dynamic Learning Environment

### Copyright notice

Copyright (C) 1999 onwards Martin Dougiamas (<https://moodle.com>)

This program is free software: you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation, either version 3 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.

See the Moodle License information page for full details: <https://docs.moodle.org/dev/License>

### Confirm

Have you read these conditions and understood them?

Continue Cancel

PHP setting max\_input\_vars is recommended to be at least 5000.

Your server environment meets all minimum requirements. X

Continue ?

Portainer | Local

Installation

← → ↻

No seguro

http://192.168.33.115:8080/use

Iniciar sesión

Collapse all

▼ General

Username

admin

Choose an authentication method

Manual accounts

The password must have at least 8 characters, at least 1 digit(s), at least 1 lower case letter(s), at least 1 upper case letter(s), at least 1 special character(s) such as as \*, -, or #

New password

Force password change

First name

Administrador

Surname

Sistema

Email address

admin@example.com

Email display

Allow everyone to see my email address

City/town

xativa

Select a country

Spain

Timezone

Server timezone (Europe/London)



Portainer | local

Dashboard

+

⌵

⌵

⏪ ⏩ ↺

No seguro

http://192.168.33.115:8080/my/

🔍 ⭐

👤 Iniciar sesión

moodle

Home

Dashboard

My courses

Site administration

🔔

💬

AS ⌵

Edit mode

Welcome, Administrador! 🙌

### Timeline

Next 7 days ⌵

Sort by dates ⌵

Search by activity type or name



No in-progress courses

### Calendar

All courses ⌵

New event

◀ October

November 2025

December ▶

Mon	Tue	Wed	Thu	Fri	Sat	Sun
-----	-----	-----	-----	-----	-----	-----

					1	2
--	--	--	--	--	---	---

⏪ ⏩ ↺

No seguro

http://192.168.33.115:8080/course/view

🔍 ⭐

👤 Iniciar sesión

📄

☰

moodle Home Dashboard My courses Site administration



AS ⌵

Edit mode ☐



## Aula Virtual de Daniel

Course

Settings

Participants

Grades

Reports

More ⌵

### ▼ General

Collapse all



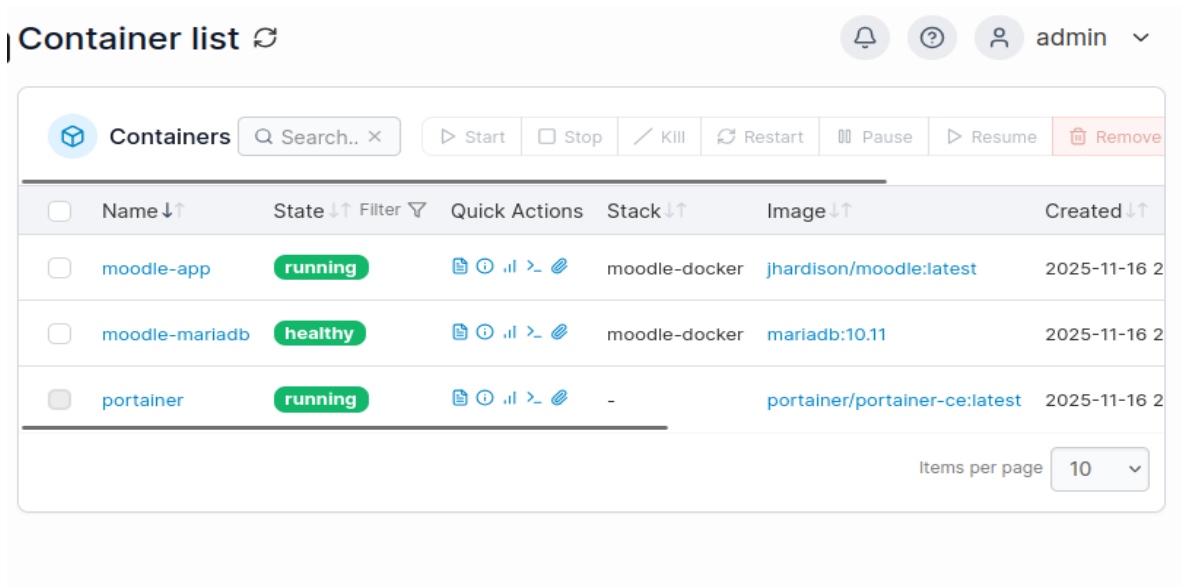
FORUM

Announcements

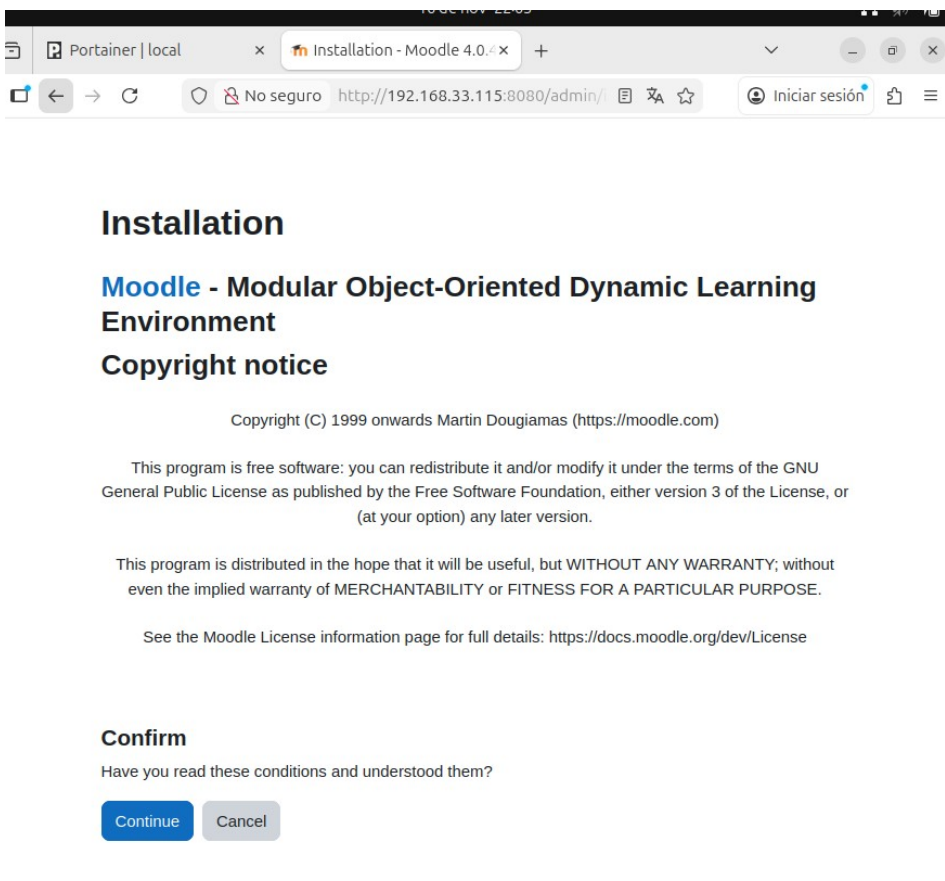


## CAPTURAS REQUERIDAS:

### Portainer CE con los contenedores creados:



### Primera pantalla de la instalación



## Aula virtual creada:

moodle

Home

Dashboard

My courses

Site administration

AS

Edit mode

### Aula Virtual de Daniel

Course

Settings

Participants

Grades

Reports

More

General

Collapse all

FORUM

Announcements

## Usuarios creados:

moodle DANIEL

Search

General

Users

Courses

Grades

Plugins

Appearance

Server

More

### 3 Users

New filter

User full name













contains

Show more...

Add filter

First name / Surname	Email address	City/town	Country	Last access	Edit
Administrador Sistema	admin@example.com	xativa	Spain	1 min	
Daniel profesor	profesor@example.com			Never	
María Estudiante	alumno@example.com			Never	

## Usuarios inscritos en el aula creada

<input type="checkbox"/>		Email address	Roles	Groups	course	Status
<input type="checkbox"/>	ME <b>María Estudiante</b>	alumno@example.com	Student 	No groups	Never	Active   
<input type="checkbox"/>	Dp <b>Daniel profesor</b>	profesor@example.com	Student 	No groups	Never	Active   
<input type="checkbox"/>	AS <b>Administrador Sistema</b>	admin@example.com	Teacher 	No groups	1 min 9 secs	Active   

With selected users...

Choose...

Enrol users

