

## Deploying Moodle on Cloud using Docker with SSL in 21 minutes

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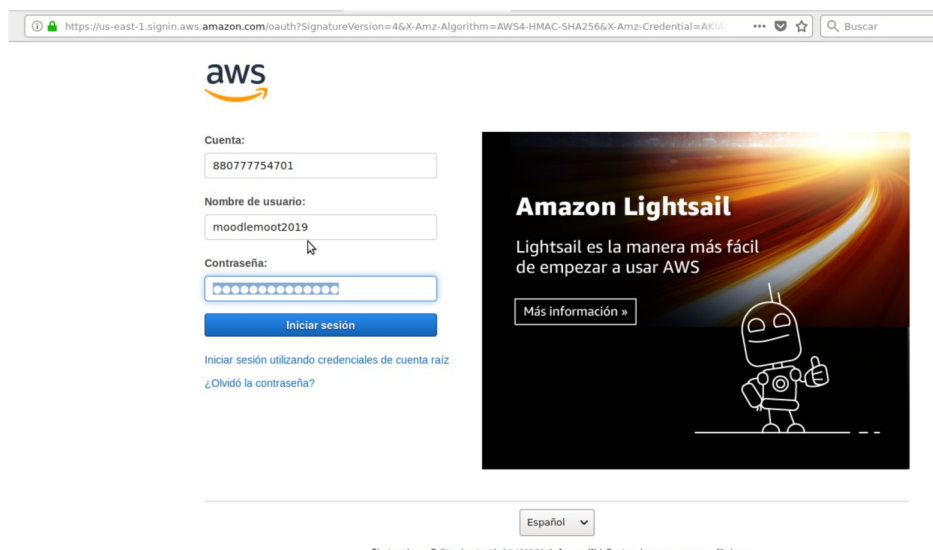
### Parte 1: Creación de una Máquina Virtual en la nube de Amazon AWS

1. Inicie sesión en AWS con los siguientes datos:

<https://880777754701.signin.>

Usuario: moodlemoot2019

Contraseña: \* se informa verbalmente durante el taller



The screenshot shows the AWS sign-in interface in a web browser. The address bar displays a URL for account authentication. On the left, there are input fields for 'Cuenta:' (containing '880777754701'), 'Nombre de usuario:' (containing 'moodlemoot2019'), and 'Contraseña:' (masked with dots). Below these is a blue 'Iniciar sesión' button. To the right of the inputs is a promotional banner for 'Amazon Lightsail' with the text 'Lightsail es la manera más fácil de empezar a usar AWS' and a 'Más información »' button. At the bottom, there is a language dropdown set to 'Español' and a footer with 'Términos de uso' and 'Política de privacidad' links.

## 2. Seleccione la opción ejecutar una máquina virtual EC2

The screenshot shows the AWS Management Console home page. The main heading is "Consola de administración de AWS". Below this, there are several sections:

- Servicios de AWS:** A search bar with the text "Buscar servicios" and a placeholder "Puede escribir nombres, palabras clave o acrónimos." Below the search bar, there is a list of "Servicios visitados recientemente" with "IAM" listed. A link "Todos los servicios" is also present.
- Crear una solución:** A section with the text "Comience a usar asistentes sencillos y flujos de trabajo automatizados." Below this, there are four cards:

Card Title	Description	Time
<b>Ejecute una máquina virtual</b>	Con EC2 De 2 a 3 minutos	5 minutos
<b>Diseñe una aplicación web</b>	Con Elastic Beanstalk 6 minutos	3 minutos
<b>Diseñe utilizando servidores virtuales</b>	Con Lightsail De 1 a 2 minutos	5 minutos
<b>Conecte un dispositivo IoT</b>	Con AWS IoT 5 minutos	5 minutos

Below the cards, there are four more options:

- Comience un proyecto de desarrollo** (Con CodeStar, 5 minutos)
- Registre un dominio** (Con Route 53, 3 minutos)
- Implemente un microservicio sin servidor** (Con Lambda, API Gateway)
- Aloje una aplicación web estática** (Con la consola de AWS Amplify, 5 minutos)

On the right side, there are several promotional cards:

- Acceda a los recursos desde cualquier lugar:** A card with a mobile phone icon and text "Acceda a la consola de administración mediante la aplicación móvil de la consola de AWS. Más información".
- Explorar AWS:** A section with two cards:
  - Amazon Redshift:** "Almacén de datos rápido, sencillo y rentable que permite ampliar las consultas a su lago de datos. Más información".
  - Ejecute contenedores sin servidor con AWS Fargate:** "AWS Fargate ejecuta y escala sus contenedores sin tener que administrar servidores ni clústeres. Más información".
- Copia de seguridad y restauración escalable, resistente y segura con Amazon S3:** "Descubra la forma en que los clientes crean soluciones de copia de seguridad y restauración en AWS que les permiten ahorrar dinero. Más información".
- AWS Marketplace:** "Busque, compre e implemente productos de software populares que se ejecutan en AWS. Más información".

## 3. Seleccione una máquina con Ubuntu

The screenshot shows the "Step 1: Choose an Amazon Machine Image (AMI)" page of the AWS Launch Instance Wizard. The page has a progress bar at the top with steps: 1. Choose AMI, 2. Choose Instance Type, 3. Configure Instance, 4. Add Storage, 5. Add Tags, 6. Configure Security Group, 7. Review.

The main heading is "Step 1: Choose an Amazon Machine Image (AMI)". Below this, there is a search bar with the text "Search for an AMI by entering a search term e.g. 'Windows'".

On the left, there is a sidebar with the following sections:

- Quick Start**
- My AMIs**
- AWS Marketplace**
- Community AMIs**
- ☐ Free tier only

The main content area displays a list of AMIs:

AMI Name	Description	Root device type	Virtualization type	ENA Enabled	Select
<b>Amazon Linux 2 AMI (HVM), SSD Volume Type</b>	Amazon Linux 2 comes with five years support. It provides Linux kernel 4.14 tuned for optimal performance on Amazon EC2, systemd 219, GCC 7.3, Glibc 2.26, Binutils 2.29.1, and the latest software packages through extras.	efs	hvm	Yes	Select
<b>Amazon Linux AMI 2018.03.0 (HVM), SSD Volume Type</b>	The Amazon Linux AMI is an EBS-backed, AWS-supported image. The default image includes AWS command line tools, Python, Ruby, Perl, and Java. The repositories include Docker, PHP, MySQL, PostgreSQL, and other packages.	efs	hvm	Yes	Select
<b>Red Hat Enterprise Linux 8 (HVM), SSD Volume Type</b>	Red Hat Enterprise Linux version 8 (HVM), EBS General Purpose (SSD) Volume Type	efs	hvm	Yes	Select
<b>SUSE Linux Enterprise Server 15 SP1 (HVM), SSD Volume Type</b>	SUSE Linux Enterprise Server 15 Service Pack 1 (HVM), EBS General Purpose (SSD) Volume Type. Public Cloud, Advanced Systems Management, Web and Scripting, and Legacy modules enabled.	efs	hvm	Yes	Select
<b>Ubuntu Server 18.04 LTS (HVM), SSD Volume Type</b>	Ubuntu Server 18.04 LTS (HVM), EBS General Purpose (SSD) Volume Type. Support available from Canonical (http://www.ubuntu.com/cloud/services).	efs	hvm	Yes	Select

Below the list, there is a section titled "Are you launching a database instance? Try Amazon RDS." with a link to "Amazon Relational Database Service (RDS)".

4. Seleccione la opción de Configurar Grupo de Seguridad. Allí escoja el grupo moodlemoot2019. Luego pulse el botón “Review and Launch”.

Step 6: Configure Security Group

A security group is a set of firewall rules that control the traffic for your instance. On this page, you can add rules to allow specific traffic to reach your instance. For example, if you want to set up a web server and allow internet traffic to reach your instance, add rules that allow unrestricted access to the HTTP and HTTPS ports. You can create a new security group or select from an existing one below. [Learn more](#) about Amazon EC2 security groups.

Assign a security group: ☐ Create a new security group ☒ Select an existing security group

Security Group ID	Name	Description	Actions
sg-9eabf1f2	default	default VPC security group	<a href="#">Copy to new</a>
sg-0e13debe953391b83	launch-wizard-1	launch-wizard-1 created 2019-08-26T08:54:12.050-05:00	<a href="#">Copy to new</a>
sg-07d137ebd5ae3e122	launch-wizard-2	launch-wizard-2 created 2019-08-26T20:47:09.131-05:00	<a href="#">Copy to new</a>
sg-0fbd819e67acb47f2	launch-wizard-3	launch-wizard-3 created 2019-08-27T17:28:36.184-05:00	<a href="#">Copy to new</a>
<b>sg-06b0c4667f662345b</b>	<b>moodlemoot2019</b>	<b>moodlemoot2019</b>	<a href="#">Copy to new</a>

Inbound rules for sg-06b0c4667f662345b (Selected security groups: sg-06b0c4667f662345b)

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	
SSH	TCP	22	0.0.0.0/0	
SSH	TCP	22	:::0	
HTTPS	TCP	443	0.0.0.0/0	
HTTPS	TCP	443	:::0	

[Cancel](#) [Previous](#) [Review and Launch](#)

5. Pulse el botón “Launch” para terminar el proceso.

Step 7: Review Instance Launch

Please review your instance launch details. You can go back to edit changes for each section. Click **Launch** to assign a key pair to your instance and complete the launch process.

**Improve your instances' security. Your security group, moodlemoot2019, is open to the world.**

Your instances may be accessible from any IP address. We recommend that you update your security group rules to allow access from known IP addresses only. You can also open additional ports in your security group to facilitate access to the application or service you're running, e.g., HTTP (80) for web servers. [Edit security groups](#)

AMI Details

Ubuntu Server 18.04 LTS (HVM), SSD Volume Type - ami-05c1fa8df71875112

Free tier eligible

Root Device Type: ebs Virtualization type: hvm

Instance Type

Instance Type	ECUs	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance
t2.micro	Variable	1	1	EBS only	-	Low to Moderate

Security Groups

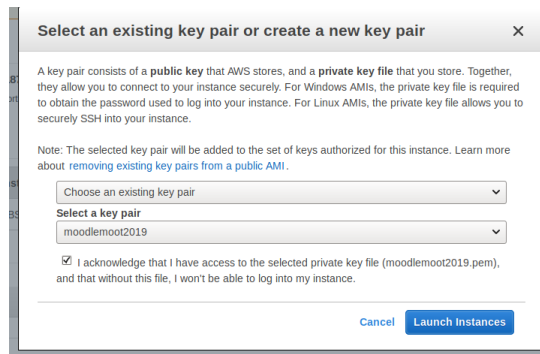
Security Group ID	Name	Description
sg-06b0c4667f662345b	moodlemoot2019	moodlemoot2019

All selected security groups inbound rules

Type	Protocol	Port Range	Source	Description
HTTP	TCP	80	0.0.0.0/0	
HTTP	TCP	80	:::0	

[Cancel](#) [Previous](#) [Launch](#)

6. En la ventana que aparece seleccione moodlemoot2019, una llave configurada para el taller.



Select an existing key pair or create a new key pair

A key pair consists of a **public key** that AWS stores, and a **private key file** that you store. Together, they allow you to connect to your instance securely. For Windows AMIs, the private key file is required to obtain the password used to log into your instance. For Linux AMIs, the private key allows you to securely SSH into your instance.

Note: The selected key pair will be added to the set of keys authorized for this instance. Learn more about [removing existing key pairs from a public AMI](#).

Choose an existing key pair

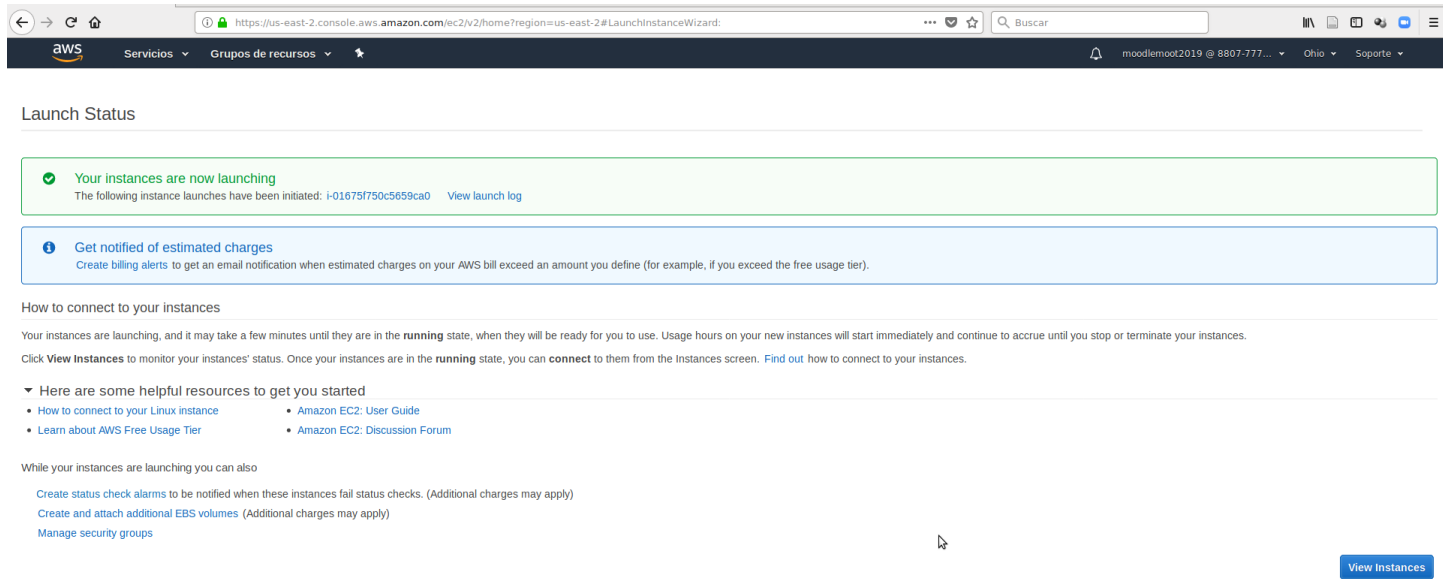
Select a key pair

moodlemoot2019

☒ I acknowledge that I have access to the selected private key file (moodlemoot2019.pem), and that without this file, I won't be able to log into my instance.

Cancel Launch Instances

7. Pulse el botón “View Instances” y espere un poco a que la instancia se termine de crear.



Launch Status

✓ Your instances are now launching  
The following instance launches have been initiated: i-01675f750c5659ca0 [View launch log](#)

📢 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 instances

Your instances are launching, and it may take a few minutes until they are in the **running** state, when they will be ready for you to use. Usage hours on your new instances will start immediately and continue to accrue until you stop or terminate your instances. Click **View Instances** to monitor your instances' status. Once your instances are in the **running** state, you can **connect** to them from the Instances screen. [Find out](#) how to connect to your instances.

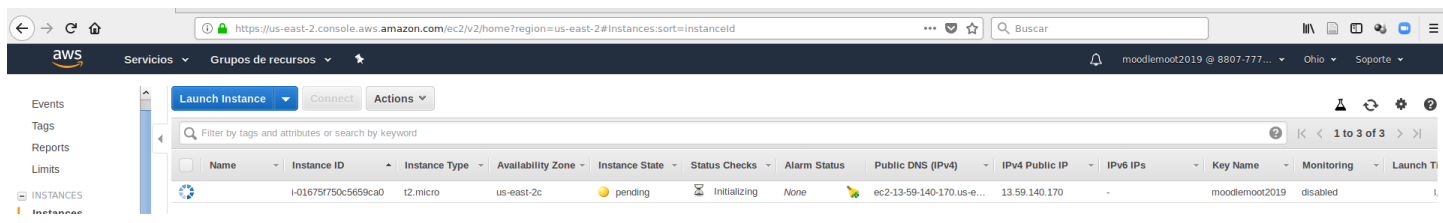
▼ Here are some helpful resources to get you started

- [How to connect to your Linux instance](#)
- [Amazon EC2: User Guide](#)
- [Learn about AWS Free Usage Tier](#)
- [Amazon EC2: Discussion Forum](#)

While your instances are launching you can also

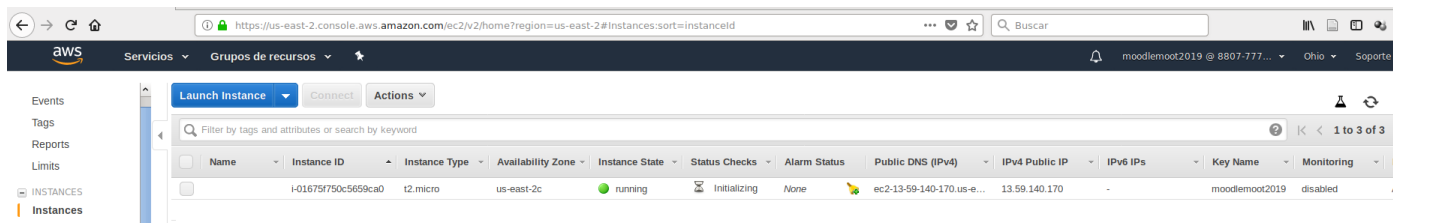
- [Create status check alarms](#) to be notified when these instances fail status checks. (Additional charges may apply)
- [Create and attach additional EBS volumes](#) (Additional charges may apply)
- [Manage security groups](#)

[View Instances](#)



Instances

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring	Launch T
	i-01675f750c5659ca0	t2.micro	us-east-2c	pending	Initializing	None	ec2-13-59-140-170.us-e...	13.59.140.170	-	moodlemoot2019	disabled	



Instances

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP	IPv6 IPs	Key Name	Monitoring	Launch T
	i-01675f750c5659ca0	t2.micro	us-east-2c	running	Initializing	None	ec2-13-59-140-170.us-e...	13.59.140.170	-	moodlemoot2019	disabled	

8. Toma nota de las direcciones IP pública y privada y los DNS que AWS asignó a la máquina. Estas direcciones y DNS serán usadas posteriormente.

The screenshot shows the AWS Management Console for an EC2 instance named 'moodlemoot2019'. The instance is in the 'us-east-2' region, running on a 't2.micro' instance type. The public IP address is 13.59.140.170. A table highlights the DNS and IP information:

Property	Value
Public DNS (IPv4)	ec2-13-59-140-170.us-east-2.compute.amazonaws.com
IPv4 Public IP	13.59.140.170
IPv6 IPs	-
Private DNS	ip-172-31-46-104.us-east-2.compute.internal
Private IPs	172.31.46.104

Felicitaciones, has creado un servidor Linux Ubuntu en la nube de Amazon AWS. Avanza a la Parte 2.