

# Configuración de servidores Amazon Web Service

DR. RAFAEL ROJANO  
[tareasrojano@gmail.com](mailto:tareasrojano@gmail.com)



# ¿Qué es Amazon Web Service?

---

- En 2006, Amazon Web Services (AWS) comenzó a proporcionar servicios de infraestructura de TI para empresas en forma de servicios web, más conocido hoy como informática en la nube.
- Gracias a la nube, las empresas ya no tienen que planificar ni adquirir servidores ni otras infraestructuras de TI con semanas o meses de antelación. Pueden disponer en cuestión de minutos de cientos o de miles de servidores y ofrecer resultados más rápidamente.
- Este tipo de servicios claro que tiene costos asociados, pero podemos explorar gratuitamente, al menos por 12 meses:
  - <https://aws.amazon.com/es/free/> - requiere una tarjeta para validar -
  - <https://aws.amazon.com/es/education/awseducate/> - no requiere tarjeta, pero tiene limitaciones -

<https://aws.amazon.com/es/about-aws/>





Entrar en contacto con el departamento de ventas [Soporte](#) [Español](#) [Mi cuenta](#) [Finalizar inscripción](#)

[Productos](#) [Soluciones](#) [Precios](#) [Documentación](#) [Aprender](#) [Red de socios](#) [AWS Marketplace](#) [Capacitación para clientes](#) [Más información](#) [Q](#)

**AWS Educate**  
[Inicio](#) [Estudiantes](#) [Educadores](#) [Empleadores](#) [EE.UU. Veteranos de guerra](#) [Líderes institucionales](#) [Testimonios](#) [Contenido multimedia](#)  
[Preguntas frecuentes](#)



**aws educate**

Su traspaso a la nube comienza aquí

[Unirme a AWS Educate](#)

[Iniciar sesión en AWS Educate](#)


Durante esta época inédita de cierres temporales y sostenidos de escuelas, hemos desarrollado un conjunto de recursos para apoyarlo a usted y a sus equipos:

- Si es educador, puede [inscribirse en seminarios web](#) sobre temas como "crear una clase en línea para principiantes" y "aspectos avanzados del aprendizaje en línea" y, de esta forma, facilitar su transición al aprendizaje remoto. Además, si desea ofrecer módulos de aprendizaje en línea sobre informática en la nube a los estudiantes, laboratorios de nube virtual al cuerpo docente u obtener créditos promocionales de AWS para crear en AWS,  [únase a AWS Educate](#) sin costo para obtener acceso a estos recursos.
- Si es estudiante, puede obtener los beneficios de las oportunidades de aprendizaje en casa, sin costo, mediante las insignias de especialidades y las rutas profesionales de carreras en la nube de AWS Educate, además de [talleres y seminarios en línea](#) para ayudarlo a seguir desarrollando sus





Universidad Veracruzana



# Paso 1



  
Apply to join AWS Educate



Step 1/3: Choose your role



Preferred Language:  
English

Student

Educator

US Veteran

Institution

Company/Recruiter

Please note that any personal information you provide will be treated in accordance with the [AWS Educate Terms and Conditions](#) and [AWS Privacy Notice](#)


AWS Educate is Amazon's program to help students learn real-world cloud technology skills before graduating. It provides students and educators with the resources needed to accelerate cloud-related learning.

[Cookie Preferences](#) | [Terms and Conditions](#) | © 2021, Amazon Web Services, Inc. or its affiliates. All rights reserved.



Universidad Veracruzana

# Paso 2

  
Apply to join AWS Educate

Step 2/3: Tell us about yourself

Preferred Language:  
English

School or Institution Name  
Start typing the name of your school and select from the list. If you don't see your school, enter the full name, example: Harvard University

Country

First Name

Last Name

Email  
Please provide a valid, current email issued by your institution. Example: your\_name@your\_school.edu

Graduation Month

Graduation Year


Birth Month

Birth Year

Promo Code (optional)

[Frequently Asked Questions](#)

Please click the box below to help assure that a person and not an automated program is submitting this application. If a set of letters is displayed enter them on the line. If you have any difficulty with the letters, you can click the reload icon to get a new set of letters, or click the headphones to hear audio of what to enter.

☐ No soy un robot   
reCAPTCHA  
Privacy - Terms

Please note that any personal information you provide will be treated in accordance with the [AWS Educate Terms and Conditions](#) and [AWS Privacy Notice](#)

NEXT

FEBRERO 2021 - JUNIO 2021


43





Universidad Veracruzana

# Paso 2

  
Apply to join AWS Educate

Step 2/3: Tell us about yourself

Preferred Language:  
English

Universidad Veracruzana

Start typing the name of your school and select from the list. If you don't see your school, enter the full name, example: Harvard University

Mexico

Nombre

Apellido

zs10101010@estudiantes.uv.mx

Please provide a valid, current email issued by your institution. Example: your\_name@your\_school.edu

07

2025


11


1998

Promo Code (optional)

[Frequently Asked Questions](#)

Please click the box below to help assure that a person and not an automated program is submitting this application. If a set of letters is displayed enter them on the line. If you have any difficulty with the letters, you can click the reload icon to get a new set of letters, or click the headphones to hear audio of what to enter.

 No soy un robot

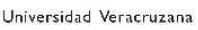
  
reCAPTCHA  
Privacidad - Términos

Please note that any personal information you provide will be treated in accordance with the [AWS Educate Terms and Conditions](#) and [AWS Privacy Notice](#)

NEXT

FEBRERO 2021 - JUNIO 2021

44



## Paso 3



## Terms & Conditions

English

(Last Updated April 30, 2019)

## 1.0 YOUR AGREEMENT WITH AWS

11 **This Agreement.** This set of terms and conditions (this “**Agreement**”) is an agreement between you (or the Entity you work for) (“**you**”) and Amazon Web Services, Inc. or other entity noted in Section 10 (in either case, “**AWS**,” “**we**,” or “**us**”). This Agreement governs your participation in the AWS Educate Program (the “**Program**”) described at <https://aws.amazon.com/education/awseducate/> and its subpages (the “**Program Site**”), including (a) your use and submission of data, text, audio, video, images, software (including machine images), or other materials (collectively, “**Content**”) in connection with the Program; and (b) your use of any tools, websites, and services AWS may provide to you in connection with the Program (collectively, the “**Educate Tools**”). If you are entering into this Agreement for a commercial entity, government institution, or any other entity (“**Entity**”), such as the company or educational institution you work for, you represent that you have legal authority to bind that Entity, and references to “you” in this Agreement will be deemed as referring to that Entity. If you have an AWS Customer Agreement (available at <http://aws.amazon.com/agreement/>) or other agreement between you and AWS governing your use of AWS services (“**AWS Services Agreement**”), that agreement will govern your use of the web services described in the Service Terms of the agreement and any other Service Offerings covered by (and as defined therein).

1.2 **Agreement with AWS.** BY CLICKING "I ACCEPT" OR ACCEPTING PROGRAM BENEFITS (AS DEFINED BELOW) YOU ARE ENTERING INTO A LEGALLY BINDING CONTRACT

*You must scroll through the entire Terms and Conditions before accepting or declining.*

I Decline

Please note that any personal information you provide will be treated in accordance with the [AWS Educate Terms and Conditions](#) and [AWS Privacy Notice](#)



Universidad Veracruzana

# Verificar el correo

---

- En un segundo correo les llegará que ya pueden acceder





# ¿Qué es Amazon Web Service?

■ <https://aws.amazon.com/es/education/awseducate/>

**aws educate**  
Solicitud para participar en AWS Educate

Paso 3/3: elija una de las siguientes opciones

☒ **Haga clic aquí para especificar un ID de cuenta de AWS.**  
A los estudiantes aprobados se les envía un correo electrónico de bienvenida y ciertos beneficios, incluido un código promocional de AWS.

[¿No tiene? Inscribirse ahora](#)

☐ **Haga clic aquí para seleccionar una cuenta de AWS Educate Starter.**  
Una cuenta de AWS Educate Starter es una cuenta gratuita con limitaciones que no requiere una tarjeta de crédito. Existen algunas limitaciones de uso, incluida una reducción aproximada del 25% en el acceso a los servicios de AWS. Dado que las cuentas Starter son limitadas, no se proporciona ningún código promocional de AWS aparte.  
[Frequently Asked Questions](#)

Please note that any personal information you provide will be treated in accordance with the [AWS Educate Terms and Conditions](#) and [AWS Privacy Notice](#).

**SIGUIENTE** ➔



# AWS Educate starter

---

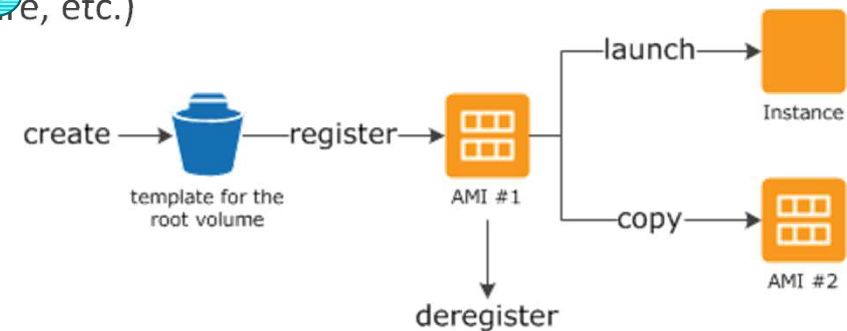
- Las cuentas creadas fuera de la opción starter son **administradas por amazon**, requieren una tarjeta y pueden **usar cualquier servicio**, al concluir los **créditos** de Educate persisten los recursos creados.
- Las cuentas Educate son administradas por un tercero (**qwikLABs**) y están sujetas a un acuerdo aparte entre usted y qwikLABs con términos y condiciones independientes. Las cuentas de este tipo no requieren tarjeta de crédito, pero solo se pueden **usar algunos servicios** y al agotarse los créditos también **se perderán** los recursos creados.

<https://aws.amazon.com/es/premiumsupport/knowledge-center/educate-starter-account/>



# Creación de una instancia EC2

- Pueden consultar un glosario de los términos de AWS, por ahora basta con identificar que EC2 representa la instancia de un sistema Linux o cualquier otro disponible en AWS y que se ejecuta en un servidor virtual.
- Las instancias se crean a partir de plantillas predefinidas que son llamadas AMI (imagen de máquina de Amazon). Estas plantillas contienen:
  - El volumen raíz (SO, software, aplicaciones, middleware, etc.)
  - Permisos de lanzamiento pre-configurados
  - Mapeo de dispositivos

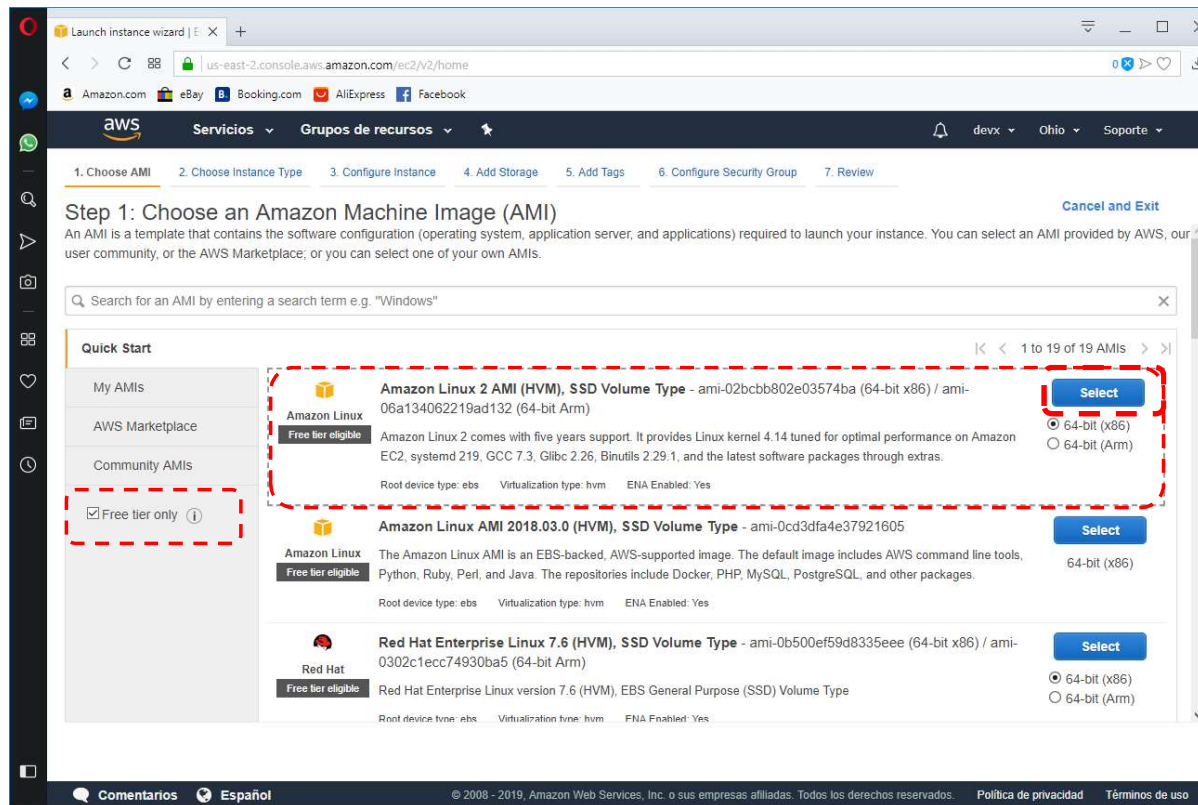


[https://docs.aws.amazon.com/es\\_es/general/latest/gr/glos-chap.html#ecr](https://docs.aws.amazon.com/es_es/general/latest/gr/glos-chap.html#ecr)



# Seleccionar la imagen deseada

1. Seleccionar las imágenes de la capa gratuita.
2. Seleccionar imagen AMI.
3. Dar clic <select>





# Seleccionar las características de la imagen

1. Seleccionar el tipo de instancia t2.micro
2. Dar clic al enlace "configure security group"

Launch instance wizard | E X +

us-east-2.console.aws.amazon.com/ec2/v2/home

Amazon.com eBay Booking.com AliExpress Facebook

Servicios Grupos de recursos

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### Step 2: Choose an Instance Type

Amazon EC2 provides a wide selection of instance types optimized to fit different use cases. Instances are virtual servers that can run applications. They have varying combinations of CPU, memory, storage, and networking capacity, and give you the flexibility to choose the appropriate mix of resources for your applications. [Learn more](#) about instance types and how they can meet your computing needs.

Filter by: All instance types Current generation Show/Hide Columns

Currently selected: t2.micro (Variable ECUs, 1 vCPUs, 2.5 GHz, Intel Xeon Family, 1 GiB memory, EBS only)

	Family	Type	vCPUs	Memory (GiB)	Instance Storage (GB)	EBS-Optimized Available	Network Performance	IPv6 Support
<input type="checkbox"/>	General purpose	t2.nano	1	0.5	EBS only	-	Low to Moderate	Yes
<input checked="" type="checkbox"/>	General purpose	t2.micro Free tier eligible	1	1	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.small	1	2	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.medium	2	4	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.large	2	8	EBS only	-	Low to Moderate	Yes
<input type="checkbox"/>	General purpose	t2.xlarge	4	16	EBS only	-	Moderate	Yes
<input type="checkbox"/>	General purpose	t2.2xlarge	8	32	EBS only	-	Moderate	Yes

Cancel Previous Review and Launch Next: Configure Instance Details

Comentarios Español

© 2008 - 2019, Amazon Web Services, Inc. o sus empresas afiliadas. Todos los derechos reservados. Política de privacidad Términos de uso



# Configurar los parámetros de conexión

1. Agregar el puerto para algún servicio necesario.

Launch instance wizard | E X +

us-east-2.console.aws.amazon.com/ec2/v2/home

Amazon.com eBay Booking.com AliExpress Facebook

aws Servicios Grupos de recursos

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### 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 name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	e.g. SSH for Admin Desktop

**Add Rule**

**Warning**

Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

Comentarios Español

© 2008 - 2019, Amazon Web Services, Inc. o sus empresas aliadas. Todos los derechos reservados. Política de privacidad Términos de uso





# Configurar los parámetros de conexión

1. Agregar el puerto para algún servicio necesario.
2. En este caso puestos 80 (web) y 8080 (web service).
3. Se procede a revisar y lanzar.

Launch instance wizard | E X +

us-east-2.console.aws.amazon.com/ec2/v2/home

Amazon.com eBay Booking.com AliExpress Facebook

Servicios Grupos de recursos

1. Choose AMI 2. Choose Instance Type 3. Configure Instance 4. Add Storage 5. Add Tags 6. Configure Security Group 7. Review

### 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 name:

Description:

Type	Protocol	Port Range	Source	Description
SSH	TCP	22	Custom 0.0.0.0/0	ssh para administracion
HTTP	TCP	80	Custom 0.0.0.0/0	acceso http
Custom TCP F	TCP	8080	Custom 0.0.0.0/0	acceso web service

Add Rule

**Warning**  
Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Previous **Review and Launch**

Comentarios Español

© 2008 - 2019, Amazon Web Services, Inc. o sus empresas aliadas. Todos los derechos reservados. Política de privacidad Términos de uso



# Se revisan las configuraciones iniciales

The screenshot displays the AWS Management Console's 'Launch instance wizard' at Step 7: Review Instance Launch. The interface is in Spanish, with the top navigation bar showing 'Servicios' and 'Grupos de recursos'. The wizard progress bar indicates the current step is '7. Review'. The main content area shows the following configuration details:

- IAM role:** None
- Tenancy:** default
- T2/T3 Unlimited:** Disabled
- Host ID:** Off
- Affinity:** Off
- Kernel ID:** Use default
- RAM disk ID:** Use default
- User data:** Use subnet setting (Enable)
- Assign Public IP:** Use subnet setting (Enable)
- Assign IPv6 IP:** Use subnet setting (Enable)
- Network interfaces:**

The **Storage** section shows a table with the following data:

Volume Type	Device	Snapshot	Size (GiB)	Volume Type	IOPS	Throughput (MB/s)	Delete on Termination	Encrypted
Root	/dev/xvda	snap-0d2b36e2ba06f14f6	8	gp2	100 / 3000	N/A	Yes	Not Encry...

The **Tags** section shows a table with the following data:

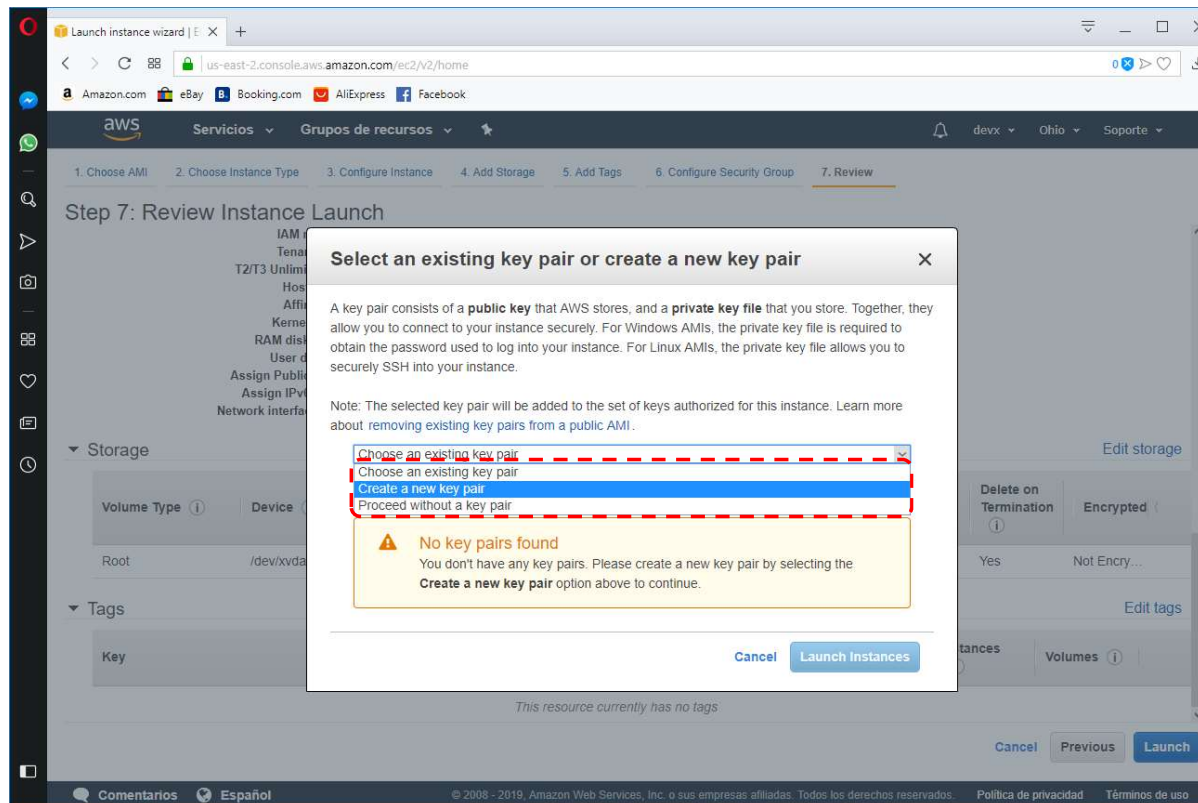
Key	Value	Instances	Volumes

The bottom bar contains the 'Cancel', 'Previous', and 'Launch' buttons. The 'Launch' button is highlighted with a red dashed box.



# Crear key pair

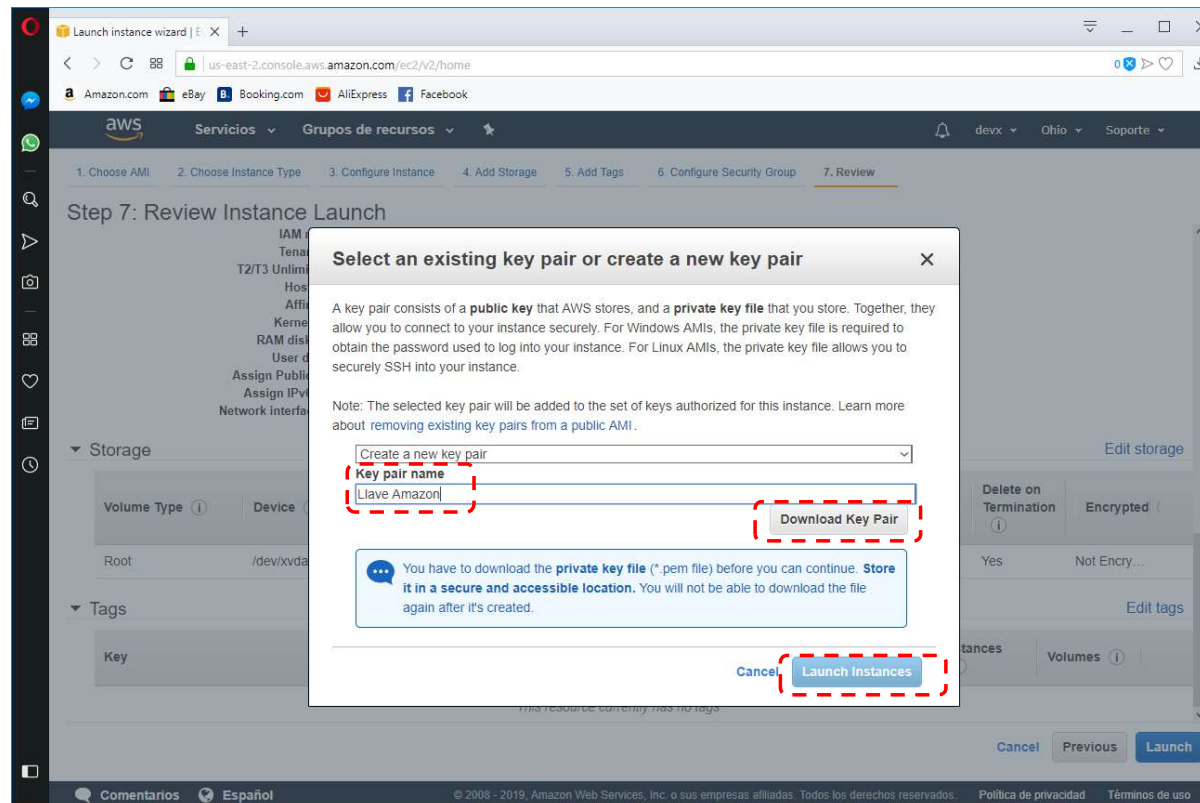
1. Seleccionar crear un nuevo "key pair" en caso de no contar con uno.





# Crear key pair

1. Seleccionar crear un nuevo "key pair" en caso de no contar con uno.
2. Elegir un nombre para el par de llaves.
3. Descargar las llaves.
4. Seleccionar lanzar instancia.





# Por si las dudas

1. Seleccione alerta de seguridad en caso de exceder la configuración de la capa gratuita 😓
2. Seleccione ver instancia



# Ver la instancia

The screenshot displays the AWS Management Console interface for the 'Instances' page. The left sidebar contains navigation links for various AWS services. The main content area shows a table of instances, with one instance selected. Below the table, the details of the selected instance are displayed in a key-value format.

Name	Instance ID	Instance Type	Availability Zone	Instance State	Status Checks	Alarm Status	Public DNS (IPv4)	IPv4 Public IP
	i-aabbccdd11009988	t2.micro	us-east-2c	running	2/2 checks ...	None	ec2-127.0.1.1.us-east...	16.10.10.10

**Instance Details:**

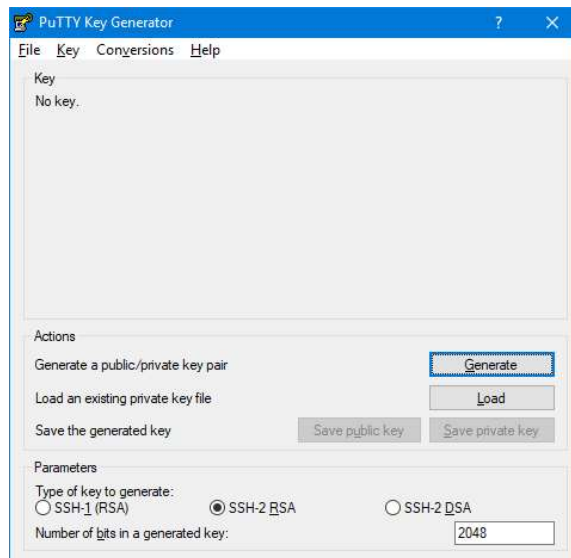
- Instance ID: i-aabbccdd11009988
- Instance state: running
- Instance type: t2.micro
- Elastic IPs: -
- Availability zone: us-east-2c
- Security groups: launch-wizard-1, view inbound rules, view outbound rules
- Scheduled events: No scheduled events
- AMI ID: amzn2-ami-hvm-2.0.20190313-x86\_64-gp2 (ami-aabbccdd11009988)
- Platform: -
- IAM role: -
- Key pair name: Liave Amazon
- Owner: yo123yo123
- Launch time: April 1, 2019 at 4:28:45 PM UTC-6 (less than one hour)
- Termination protection: False
- Lifecycle: normal
- Monitoring: basic
- Alarm status: None
- Kernel ID: -
- RAM disk ID: -
- Placement group: -
- Public DNS (IPv4): ec2-127-0-1-1.us-east-2.compute.amazonaws.com
- IPv4 Public IP: 10.10.10.10
- Private DNS: ip-12-12-12-165.us-east-2.compute.internal
- Private IPs: 12.13.14.15
- Secondary private IPs: -
- VPC ID: vpc-aabbccddde
- Subnet ID: subnet-1234512345
- Network interfaces: eth0
- Source/dest. check: True
- T2/T3 Unlimited: Disabled
- EBS-optimized: False
- Root device type: ebs
- Root device: /dev/xvda
- Block devices: /dev/xvda
- Elastic Graphics ID: -
- Elastic Inference accelerator ID: -
- Capacity Reservation: -
- Capacity Reservation Settings: Open



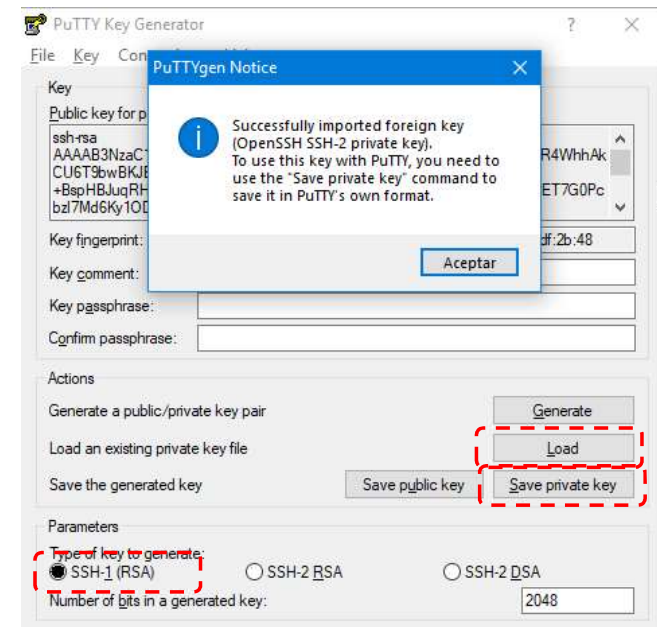


# Conectarse a la instancia

- Convertir el archivo .PEM a un formato usable por el cliente Putty
  - Usar para ello puttygen



1. Seleccionar ssh-1 (RSA)
2. Cargar la llave .pem
3. Salvar la llave privada





# Conectarse a la instancia

## ■ Adecuar parámetros en putty

1. Definir el host a conectarse (IP)
2. Configurar nombre de usuario
3. Configurar SSH/Auth indicando la ruta del archivo .ppk generado con Puttygen
4. Salvar la sesión

