

## Laboratorio Azure Database for MySQL y Postgres

1. Ingresar a la suscripción con el azure pass
2. Crear un Resource Group llamado Lab\_Azure\_Database
3. Crear una máquina virtual en el grupo de recursos creado, así: Clave Ms1234567890

Basics

Disks

Networking

Management

Guest config

Tags

Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization.  
Looking for classic VMs? [Create VM from Azure Marketplace](#)

**PROJECT DETAILS**

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

\* Subscription ⓘ

Microsoft Azure Sponsorship

\* Resource group ⓘ

Lab\_Azure\_Database

[Create new](#)

**INSTANCE DETAILS**

\* Virtual machine name ⓘ

webserver

\* Region ⓘ

West US

Availability options ⓘ

No infrastructure redundancy required

\* Image ⓘ

Ubuntu Server 18.04 LTS

[Browse all images and disks](#)

\* Size ⓘ

**Standard D2s v3**  
2 vcpus, 8 GB memory  
[Change size](#)

**ADMINISTRATOR ACCOUNT**

Authentication type ⓘ

☒ Password ☐ SSH public key

\* Username ⓘ

laboratorio

\* Password ⓘ

.....

\* Confirm password ⓘ

.....

Login with Azure Active Directory (Preview) ⓘ

☒ Password and confirm password must match.

INBOUND PORT RULES

Select which virtual machine network ports are accessible from the public internet. You can specify more limited or granular network access on the Networking tab.

\* Public inbound ports ⓘ ☐ None ☒ Allow selected ports

\* Select inbound ports 

HTTP ▾

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

DISK OPTIONS

\* OS disk type ⓘ 

Standard HDD ▾

The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

DATA DISKS

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	NAME	SIZE (GIB)	DISK TYPE	HOST CACHING
-----	------	------------	-----------	--------------

[Create and attach a new disk](#) [Attach an existing disk](#)

▾ ADVANCED

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

Configure a new or existing virtual network for your VM as well as how your VM will be accessed on the virtual network. [Learn more](#)

#### NETWORK INTERFACE

When creating a virtual machine, a network interface will be created for you.

* Virtual network ⓘ	<div>(new) Lab_Azure_Database-vnet</div> <div>Create new</div>
* Subnet ⓘ	<div>(new) default (10.0.16.0/24)</div>
Public IP ⓘ	<div>(new) webserver-ip</div> <div>Create new</div>
Network security group	<input checked="" type="radio"/> Basic <input type="radio"/> Advanced
* Public inbound ports ⓘ	<input type="radio"/> None <input checked="" type="radio"/> Allow selected ports
* Select inbound ports	<div>HTTP</div>
Accelerated networking ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off

The selected VM size does not support accelerated networking.

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

Configure monitoring and management options for your VM.

#### MONITORING

Boot diagnostics ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off
OS guest diagnostics ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off

#### IDENTITY

System assigned managed identity ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off
------------------------------------	---

#### AUTO-SHUTDOWN

Enable auto-shutdown ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off
------------------------	---

#### CANONICAL SUPPORT PLAN

[Add Ubuntu Advantage support plan](#)

#### BACKUP

Enable backup ⓘ	<input type="radio"/> On <input checked="" type="radio"/> Off
-----------------	---

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

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Add additional configuration, agents, scripts or applications via virtual machine extensions or cloud-init.

#### EXTENSIONS

Extensions provide post-deployment configuration and automation.

Extensions ⓘ

[Select an extension to install](#)

#### CLOUD INIT

Cloud init is a widely used approach to customize a Linux VM as it boots for the first time. You can use cloud-init to install packages and write files or to configure users and security. [Learn more](#)

Cloud init

[Basics](#) [Disks](#) [Networking](#) [Management](#) [Guest config](#) [Tags](#) [Review + create](#)

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Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. [Learn more](#)

Note that if you create tags and then change resource settings on other tabs, your tags will be automatically updated.

☐

KEY

VALUE

RESOURCE TYPE

All resources to be created



# Create a virtual machine

✓ Validation passed

Basics   Disks   Networking   Management   Guest config   Tags   Review + create

## PRODUCT DETAILS

Ubuntu Server 18.04 LTS

by Canonical

[Terms of use](#) | [Privacy policy](#)

Standard D2s v3

by Microsoft

[Terms of use](#) | [Privacy policy](#)

**Pricing not available for this offering**

View [Pricing details](#) for more information.

Subscription credits apply ⓘ

**0.1170 USD/hr**

[Pricing for other VM sizes](#)

## TERMS

By clicking "Create", I (a) agree to the legal terms and privacy statement(s) associated with the Marketplace offering(s) listed above; (b) authorize Microsoft to bill my current payment method for the fees associated with the offering(s), with the same billing frequency as my Azure subscription; and (c) agree that Microsoft may share my contact, usage and transactional information with the provider(s) of the offering(s) for support, billing and other transactional activities. Microsoft does not provide rights for third-party offerings. See the [Azure Marketplace Terms](#) for additional details.

## BASICS

Create

Previous

Next

[Download a template for automation](#)

## ✓ Your deployment is complete

[Go to resource](#)



Deployment name: CreateVm-Canonical.UbuntuServer-18.04-LTS-20181206104140

Subscription: [Microsoft Azure Sponsorship](#)

Resource group: [Lab\\_Azure\\_Database](#)

### DEPLOYMENT DETAILS [\(Download\)](#)

Start time: 12/6/2018, 10:55:34 AM

Duration: 3 minutes 37 seconds

Correlation ID: 559563bb-201d-4b89-a010-d00423a318ad

	RESOURCE	TYPE	STATUS	OPERATION DETAILS
✓	<a href="#">webserver</a>	Microsoft.Compute...	OK	<a href="#">Operation details</a>
✓	<a href="#">webserver619</a>	Microsoft.Network/...	Created	<a href="#">Operation details</a>
✓	<a href="#">webserver-ip</a>	Microsoft.Network/...	OK	<a href="#">Operation details</a>
✓	<a href="#">Lab_Azure_Database-</a>	Microsoft.Network/...	OK	<a href="#">Operation details</a>

Abrir puerto 22 para poder conectarnos por SSH al servidor:

[Attach network interface](#) [Detach network interface](#)

#### Network Interface: [webserver619](#)

[Effective security rules](#)

[Topology](#) ⓘ

Virtual network/subnet: [Lab\\_Azure\\_Database-vnet/default](#)

Public IP: [40.78.1.220](#)

Private IP: [10.0.16.4](#)

Accelerated networking: **Disabled**

#### APPLICATION SECURITY GROUPS ⓘ

[Configure the application security groups](#)

#### INBOUND PORT RULES ⓘ

Network security group [webserver-nsg](#) (attached to network interface: [webserver619](#))

Impacts 0 subnets, 1 network interfaces

[Add inbound port rule](#)

PRIORITY	NAME	PORT	PROTOCOL	SOURCE	DESTINATION	ACTION	
300	HTTP	80	TCP	Any	Any	✓ Allow	...
310	Port_22	22	Any	Any	Any	✓ Allow	...

## Ingreso al servidor

Ingresar al servidor usando Azure Cloud Shell con el usuario **laboratorio**, la clave **Ms1234567890** y la ip de la maquina creada.

```
ssh laboratorio@<ip>
```

## Pasarase al super usuario

```
sudo su -
```

## Descargar desde github el código de configuración de sitio web de prueba

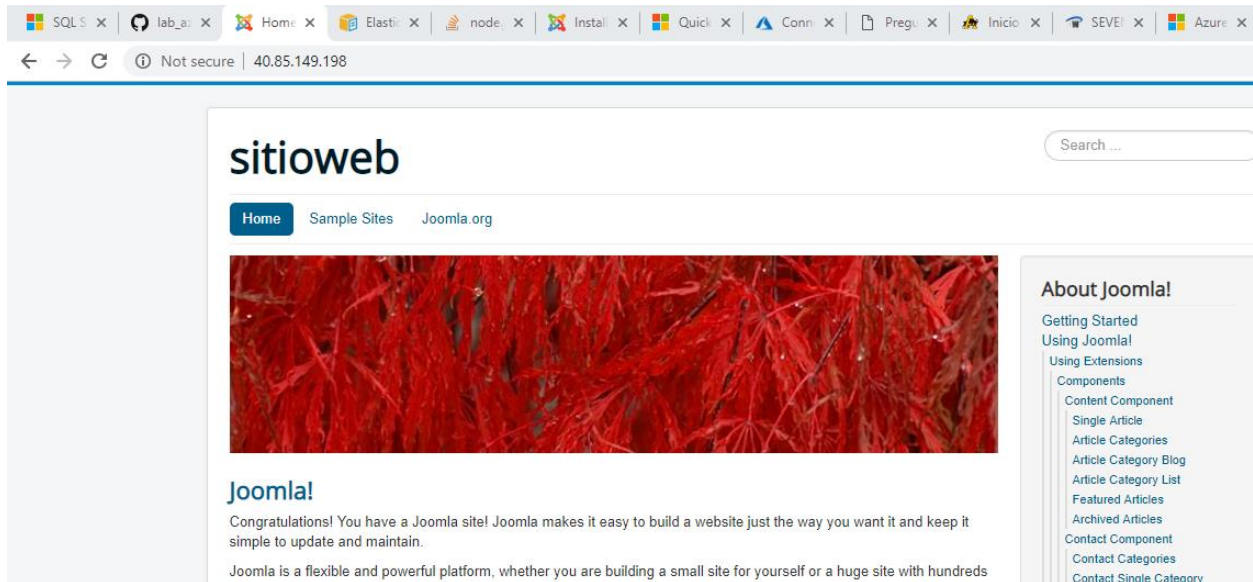
git clone [https://github.com/juansesin/lab\\_azure.git](https://github.com/juansesin/lab_azure.git)

## Ingrese a la carpeta lab\_azure y ejecute el comando configurar.sh

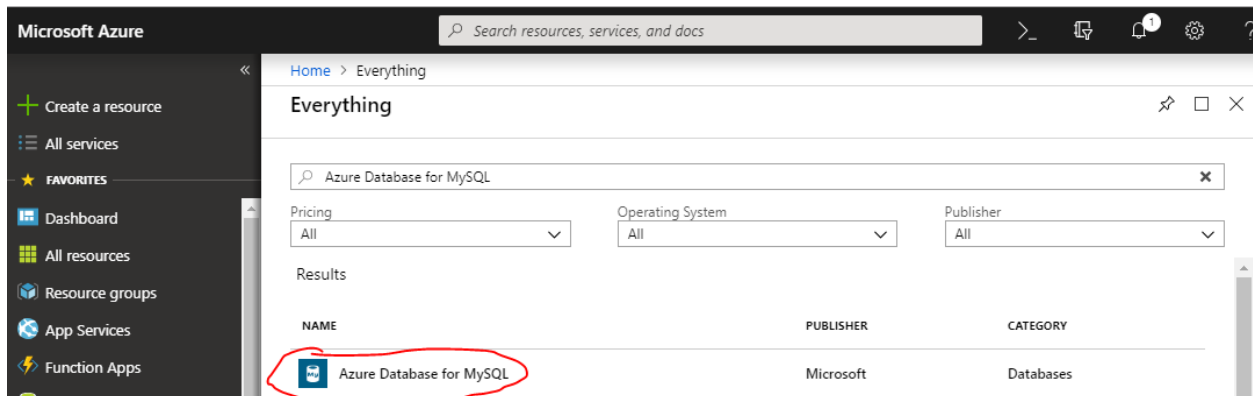
```
sh configurar.sh
```

## Verifique en un navegador

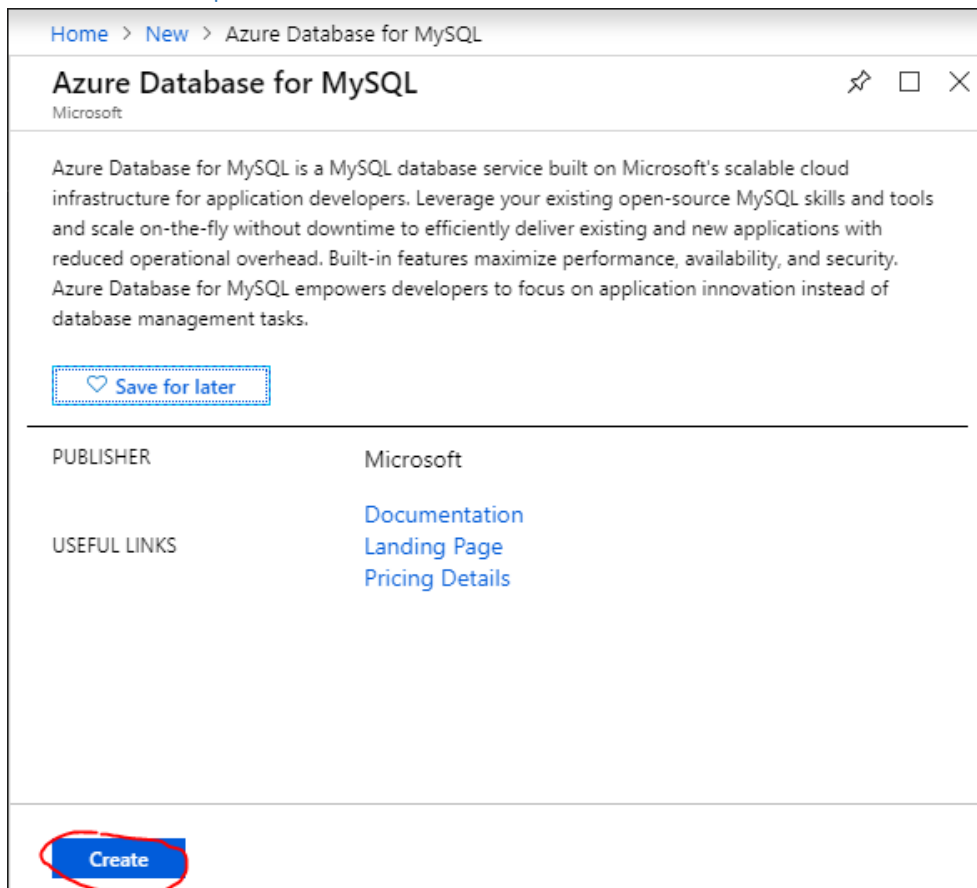
Ingrese en la URL del navegador la ip de su servidor web.



## Crear un servidor de Azure Database for Mysql



Seleccione la opción Create



Diligenciar los datos para crear la base de datos

1. Nombre del servidor de bd
2. Elija la suscripción
3. Admin -> laboratorio



4. Clave -> Ms1234567890
5. Elegir el servidor con menores características

MySQL server

\* Server name  
dbstiotweb ✓

\* Subscription  
Microsoft Azure Sponsorship

\* Resource group  
Lab\_Azure\_Database ✓  
[Create new](#)

\* Select source  
Blank

\* Server admin login name  
laboratorio ✓

\* Password  
\*\*\*\*\* ✓

\* Confirm password  
\*\*\*\*\* ✓

\* Location  
West US

\* Version  
5.7

\* Pricing tier  
General Purpose, 4 vCore(s), 1... >

Monthly cost: 248.54 USD

Create Automation options

Pricing tier

Basic  
Up to 2 vCores with  
Variable IO performance (1-2 vCores)

General Purpose  
Up to 32 vCores with  
predictable IO performance (2-32 vCores)

Memory Optimized  
Up to 16 memory optimized vCores with  
predictable IO performance (2-16 vCores)

Please note that changing to and from the Basic pricing tier or changing the backup redundancy options after server creation is not supported.

Compute Generation - [Learn more about compute generation](#)  
Gen 4 Gen 5 ✓

vCore - [What is a vCore?](#)  
1 vCore

Storage (type: [Basic Storage](#))  
5 GB

Backup Retention Period  
7 Days

Backup Redundancy Options - [Learn more details](#)

OK

Una vez se ha creado el servidor de base de datos debe configurar los permisos para poderse conectar desde el servidor Linux, debe deshabilitarse el uso de ssl para que el laboratorio funcione.

**db sitioweb - Connection security**  
Azure Database for MySQL server

Search (Ctrl+/) << Save Discard + Add client IP

Overview  
Activity log  
Tags  
Settings  
Connection security  
Connection strings  
Server parameters  
Pricing tier  
Properties  
Locks  
Automation script  
Monitoring  
Alerts  
Metrics  
Diagnostic settings  
Server logs  
Support + troubleshooting  
New support request

**Firewall rules**

Some network environments may not report the actual public-facing IP address needed to access your server. Contact your network administrator if adding your IP address does not allow access to your server.

Allow access to Azure services **ON** OFF

RULE NAME	START IP	END IP	
sitioweb1	190.93.156.170	190.93.156.170	...
sitioweb	40.85.149.198	40.85.149.198	...

VNET Rules + Adding existing virtual network + Create new virtual network

RULE NAME	VIRTUAL NETWO...	SUBNET	ADDRESS RANGE	ENDPOINT STAT...	RESOURCE GROUP	SUBSCRIPTION ID	STATE
No results							

**SSL settings**

Enforcing SSL connections on your server may require additional configuration to your applications connecting to the server. Click here to learn more.

Enforce SSL connection **ENABLED** DISABLED

Desde el servidor Linux debemos conectarnos a la base de datos así:

```
mysql -h db sitioweb.mysql.database.azure.com -u laboratorio@db sitioweb -pMs1234567890
```

Ejecute los siguientes comandos para crear la base de datos nueva y el usuario:

```
create database sitioweb;
```

```
CREATE USER 'us_sitioweb'@'localhost' IDENTIFIED BY 'password';
```

```
GRANT ALL PRIVILEGES ON sitioweb.* TO 'us_sitioweb'@'localhost';
```

Cargue la copia de la base de datos

```
mysql -h db sitioweb.mysql.database.azure.com -u laboratorio@db sitioweb -pMs1234567890
sitioweb < sitioweb.sql
```

Debemos cambiar en el archivo /var/www/html/configuration.php las variables de conexión a la base de datos:

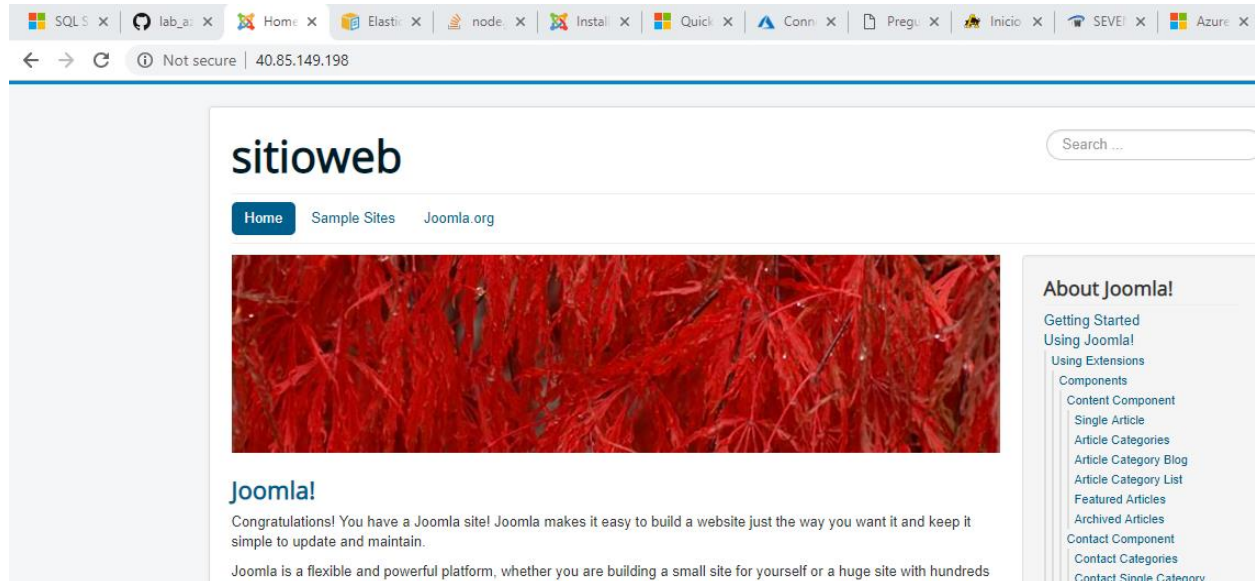
```
public $host = 'db sitioweb.mysql.database.azure.com';
```

```
public $user = 'laboratorio@db sitioweb';
```

```
public $password = 'Ms1234567890';
```

```
public $db = 'sitioweb';
```

Verifique el correcto funcionamiento del sitio web con la base de datos migrada a Azure.  
Ingresa en la URL del navegador la ip de su servidor web.



## Montaje sitio web en Azure Database for Postgres

Crear un nuevo Azure Database for Postgres siguiendo las mismas instrucciones que usamos para crear el Azure Database for MySQL.

Ir a la ruta /var/www/html

```
cd /var/www/html
```

Crear una carpeta llamada postgres

```
mkdir postgres
```

Mover el archivo joomla.tar.gz a la carpeta postgres

```
mv joomla.tar.gz postgres
```

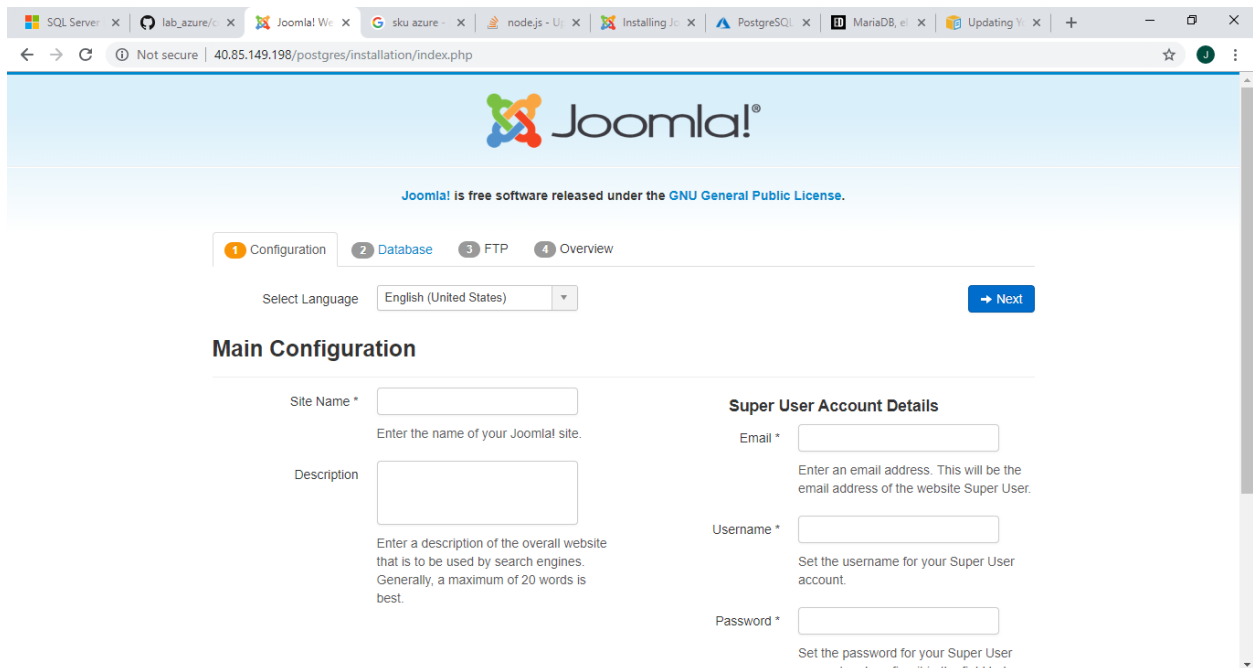
Pasarse a la carpeta postgres

```
cd postgres
```

Descomprimir el archivo joomla.tar.gz

```
tar xvf joomla.tar.gz
```


Ingresar al browser con la dirección ip del servidor web seguido de postgres y seguir los pasos de instalación de joomla con la información de la base de datos postgres que acabamos de crear.



The screenshot shows the Joomla! installation interface in a web browser. The address bar indicates the URL is 40.85.149.198/postgres/installation/index.php. The Joomla! logo is at the top, followed by the text "Joomla! is free software released under the GNU General Public License." Below this is a progress bar with four steps: 1 Configuration (active), 2 Database, 3 FTP, and 4 Overview. A language selector is set to "English (United States)" with a "Next" button. The "Main Configuration" section contains two columns of form fields. The left column has "Site Name \*" and "Description" fields. The right column has "Super User Account Details" with "Email \*", "Username \*", and "Password \*" fields. Each field has a placeholder text explaining its purpose.

SQL Server x lab.azure/ x Joomla! W x sku azure - x node.js - U x Installing J x PostgreSQL x MariaDB, e x Updating Y x + - x

← → ↻ ⓘ Not secure | 40.85.149.198/postgres/installation/index.php ☆ 4

 Joomla!®

Joomla! is free software released under the GNU General Public License.

1 Configuration 2 Database 3 FTP 4 Overview

Select Language English (United States) → Next

### Main Configuration

<p>Site Name * <input type="text"/></p> <p>Enter the name of your Joomla! site.</p> <p>Description <input type="text"/></p> <p>Enter a description of the overall website that is to be used by search engines. Generally, a maximum of 20 words is best.</p>	<p><b>Super User Account Details</b></p> <p>Email * <input type="text"/></p> <p>Enter an email address. This will be the email address of the website Super User.</p> <p>Username * <input type="text"/></p> <p>Set the username for your Super User account.</p> <p>Password * <input type="text"/></p> <p>Set the password for your Super User account and confirm it in the field below</p>
---	--

```
public $host = 'sitioweb.postgres.database.azure.com';
```

```
public $user = 'laboratorio@sitioweb';
```

```
public $password = 'Ms1234567890';
```

```
public $db = 'sitioweb';
```