



Universidad Modelo

Escuela de ingeniería

FUNDAMENTOS DE LA NUBE

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Ingeniería en desarrollo de
tecnología y software.

Cuarto Semestre

Segundo parcial

26 de Marzo del 2020




@unimodelo #IDTS


En DigitalOcean , crearemos un Droplet de la siguiente manera.


Create Droplets


Choose an image ?


[Distributions](#) [Container distributions](#) [Marketplace](#) [Custom images](#)


Ubuntu
18.04.3 (LTS) x64


FreeBSD
Select version


Fedora
Select version


Debian
Select version


CentOS
Select version

Choose a plan

[Help me choose](#)

STARTER

PERFORMANCE

Standard

General Purpose

CPU-Optimized

Memory-Optimized NEW

Standard virtual machines with a mix of memory and compute resources. Best for small projects that can handle variable levels of CPU performance, like blogs, web apps and dev/test environments.

\$40/mo
\$0.060/hour

\$80/mo
\$0.119/hour

\$160/mo
\$0.238/hour

\$240/mo
\$0.357/hour

\$320/mo
\$0.476/hour

\$480/mo
\$0.714/hour

Select additional options ?

☐ Private networking ☐ IPv6 ☐ User data ☐ Monitoring

Authentication ?

☐ SSH keys
A more secure authentication method

☒ One-time password
Emails a one-time root password to you (less secure)

Finalize and create

How many Droplets?

Deploy multiple Droplets with the same configuration.

— 1 Droplet +

Choose a hostname

Give your Droplets an identifying name you will remember them by. Your Droplet name can only contain alphanumeric characters, dashes, and periods.

ubuntu-s-4vcpu-8gb-nyc1-01


Add tags

Use tags to organize and relate resources. Tags may contain letters, numbers, colons, dashes, and underscores.

Type tags here

Select Project


Assign Droplets to a project

 cristellnaranjoesponda31@gmail.com

Después de crearlo , al entrar a la sección de Droplets, se verá de la siguiente manera.

Droplets

Search by Droplet name

Name	IP Address	Created ▲	Tags
 ClaseNube 8 GB / 160 GB Disk / NYC1 - Ubuntu 18.04.3 (LTS) x64	165.227.207.91	3 minutes ago	More ▼

A través de putty se accede vía ssh con el usuario y la contraseña.

```
login as: root
root@165.227.207.91's password:
You are required to change your password immediately (root enforced)
Welcome to Ubuntu 18.04.3 LTS (GNU/Linux 4.15.0-66-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:    https://landscape.canonical.com
 * Support:       https://ubuntu.com/advantage

System information as of Tue Mar 24 15:19:55 UTC 2020

System load:  0.0               Processes:    107
Usage of /:   0.6% of 154.90GB   Users logged in:  0
Memory usage: 1%               IP address for eth0: 165.227.207.91
Swap usage:   0%

0 packages can be updated.
0 updates are security updates.

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

Changing password for root.
```

Procederemos a cambiar la contraseña por una nueva como se pide a continuación.

```
Enter new UNIX password:
Retype new UNIX password:
root@ubuntu-s-4vcpu-8gb-nyc1-01:~#
```

Lo primero que debemos hacer para instalar docker es desinstalar cualquier versión anterior, en caso de que la haya.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo apt-get remove docker docker-engine docker.io containerd runc
Reading package lists... Done
Building dependency tree
Reading state information... Done
E: Unable to locate package docker
E: Unable to locate package docker-engine
E: Unable to locate package docker.io
E: Couldn't find any package by glob 'docker.io'
E: Couldn't find any package by regex 'docker.io'
E: Unable to locate package containerd
E: Unable to locate package runc
root@ubuntu-s-4vcpu-8gb-nyc1-01:~#
```

Actualizamos el paquete apt.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo apt-get update
```

Para permitir que apt pueda utilizar un repositorio mediante https instalaremos los paquetes.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo apt-get install \
> apt-transport-https \
> ca-certificates \
> curl \
> gnupg-agent \
> software-properties-common
```

Nos preguntará si deseamos continuar, a lo que diremos que si.

```
Do you want to continue? [Y/n] Y
```

Agregaremos la llave GPG oficial de Docker.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo apt-key add -
```

Configurar un repositorio estable.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo add-apt-repository \  
> "deb [arch=amd64] https://download.docker.com/linux/ubuntu \  
> $(lsb_release -cs) \  
> stable"
```

Actualizamos el paquete apt.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo apt-get update
```

A continuación se instalará la última versión de Docker.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo apt-get install docker-ce docker-ce-cli containerd.io
```

Nos preguntará nuevamente si deseamos continuar, a lo que diremos que si.

```
Do you want to continue? [Y/n] Y
```

Para verificar que el Docker se haya instalado correctamente utilizaremos el comando `docker ps`.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# docker ps
CONTAINER ID   IMAGE     COMMAND   CREATED
STATUS        PORTS    NAMES
```

Descargaremos la última versión de DockerCompose con el siguiente comando.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo curl -L "https://github.com/docker/compose/releases/download/1.25.4/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose
```

Aplicamos sus respectivos permisos.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# sudo chmod +x /usr/local/bin/docker-compose
```

Para verificar que se haya instalado correctamente, revisaremos la versión con el siguiente comando y deberá mostrar lo aquí mostrado.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# docker-compose --version
docker-compose version 1.25.4, build 8d51620a
```

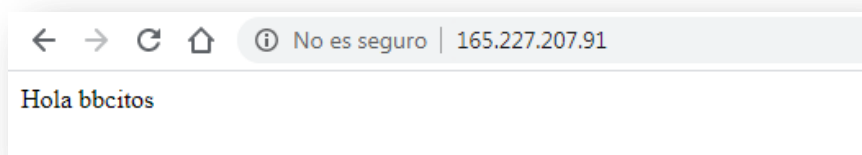
Ahora, clonaremos nuestro repositorio de GitHub.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~# git clone https://github.com/cristellnaranjo/FundamentosN.git
```

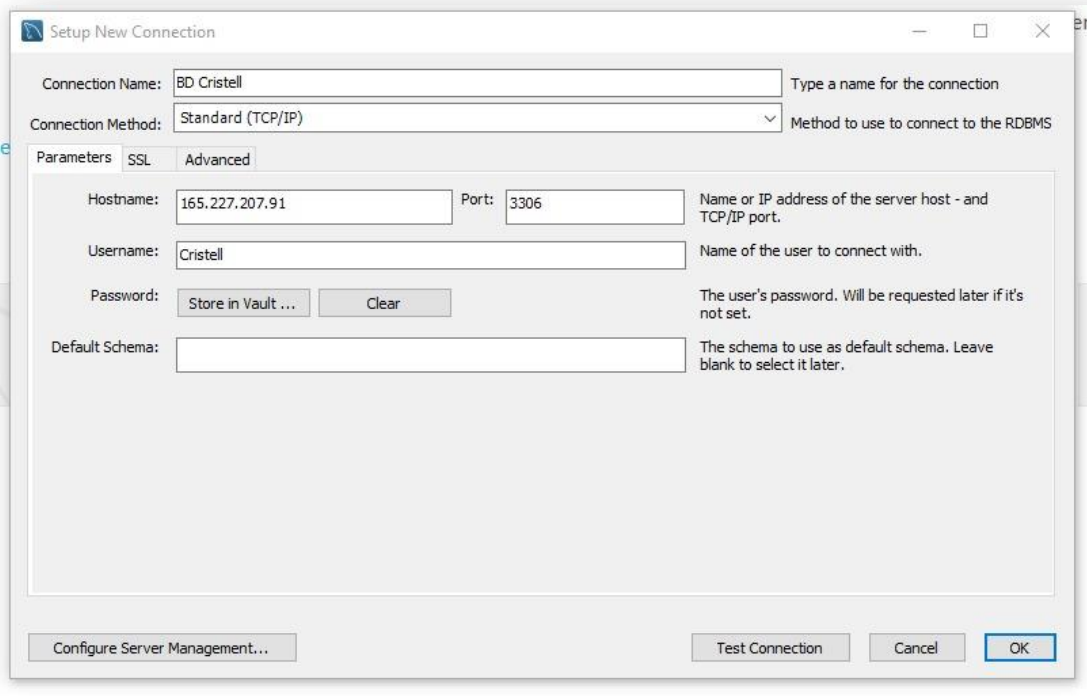
Levantaremos el contenedor mediante el docker-compose.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~/FundamentosN# docker-compose up
```

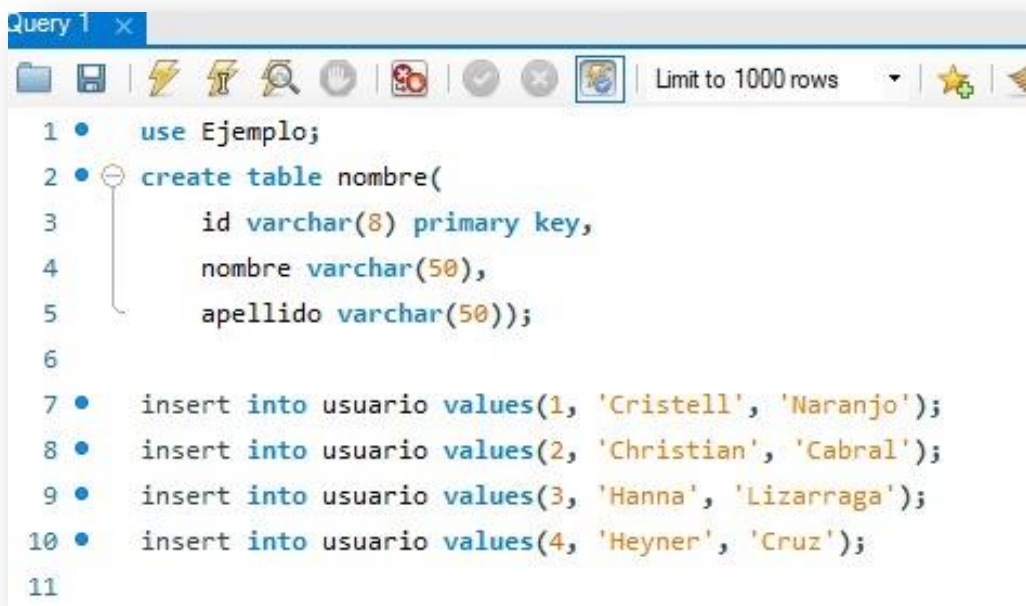
Ahora, ya podremos acceder al contenedor mediante un explorador de internet.



Se configura la conexión a la base de datos en MySQL Workbench.



Modificamos la base de datos.



Hacemos modificaciones en el archivo index.php.

```
<?php echo "Hola ingeniero Bolio"; ?>
```

Subimos los cambios.

```
C:\Users\Pavilion\Desktop\home\FundamentosN>git status
On branch master
Your branch is up to date with 'origin/master'.

Changes not staged for commit:
  (use "git add <file>..." to update what will be committed)
  (use "git restore <file>..." to discard changes in working directory)
        modified:   miweb/index.php

no changes added to commit (use "git add" and/or "git commit -a")
C:\Users\Pavilion\Desktop\home\FundamentosN>
```

```
C:\Users\Pavilion\Desktop\home\FundamentosN>git add .
C:\Users\Pavilion\Desktop\home\FundamentosN>git commit -m "Modificacion index"
[master 2fbbf1a] Modificacion index
 1 file changed, 1 insertion(+), 1 deletion(-)
C:\Users\Pavilion\Desktop\home\FundamentosN>git push origin master
```

Para bajar los cambios, hacemos un pull desde el contenedor.

```
root@ubuntu-s-4vcpu-8gb-nyc1-01:~/FundamentosN# git pull origin master
```

Y finalmente ya podremos apreciar los cambios desde el explorador.

← → ↻ 🏠 ⓘ No es seguro | 165.227.207.91

Hola ingeniero Bolio