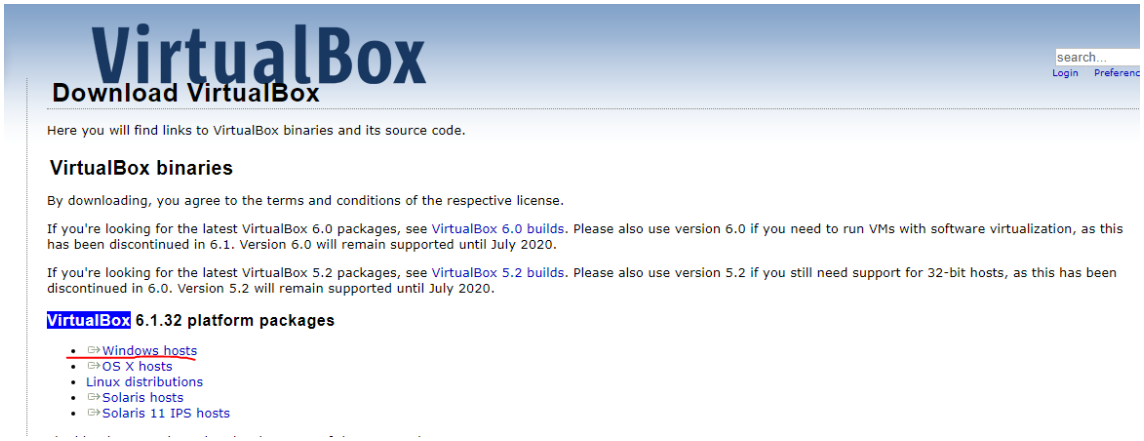
Actividad UD11- Introducción a Bases de datos

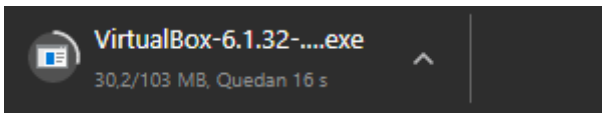
Realiza la instalación de todo el stack tecnológico necesario para el desarrollo de tu sistema de base de datos. NO queremos trabajar en localhost sino que vamos a configurar un SO virtual con todas las herramientas necesarias.

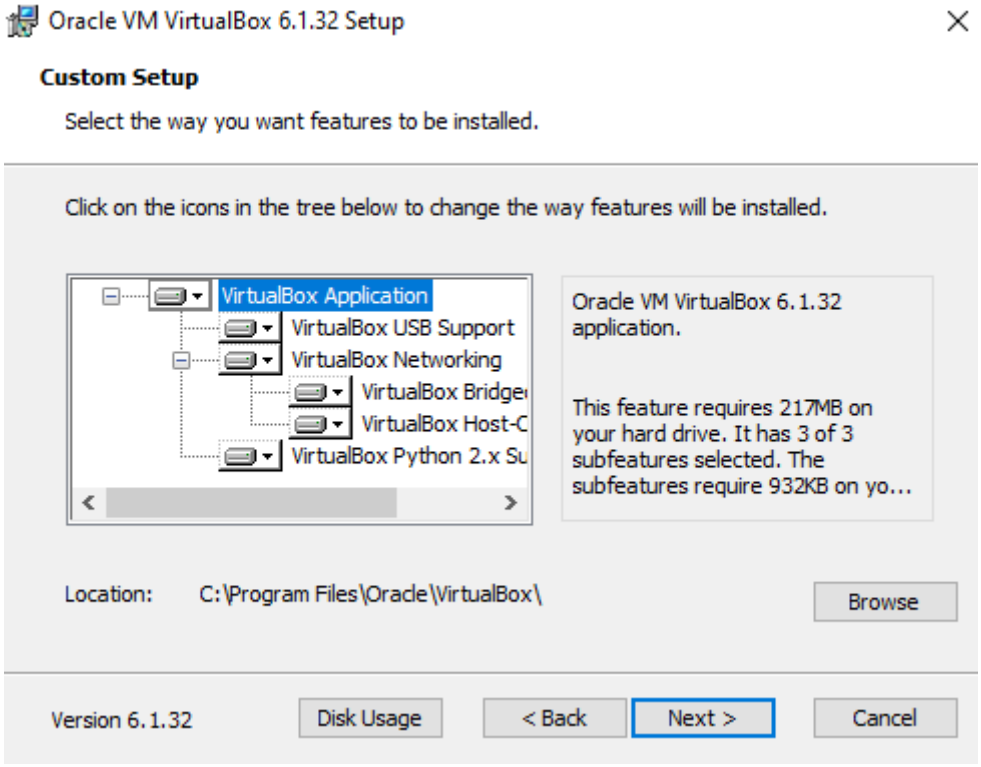
Para ello has de instalar y configurar lo siguiente:

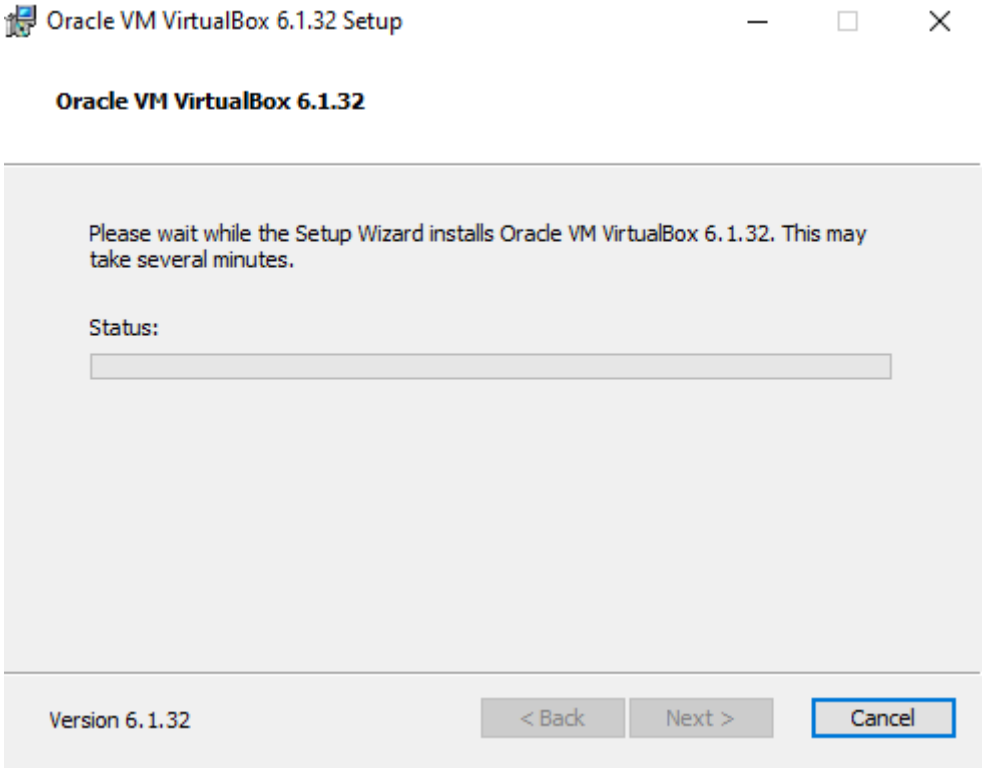
1. VirtualBox (preferible versión 6.1)

Entro a la página oficial de VirtualBox y descargo el instalador, y posteriormente lo instalo:



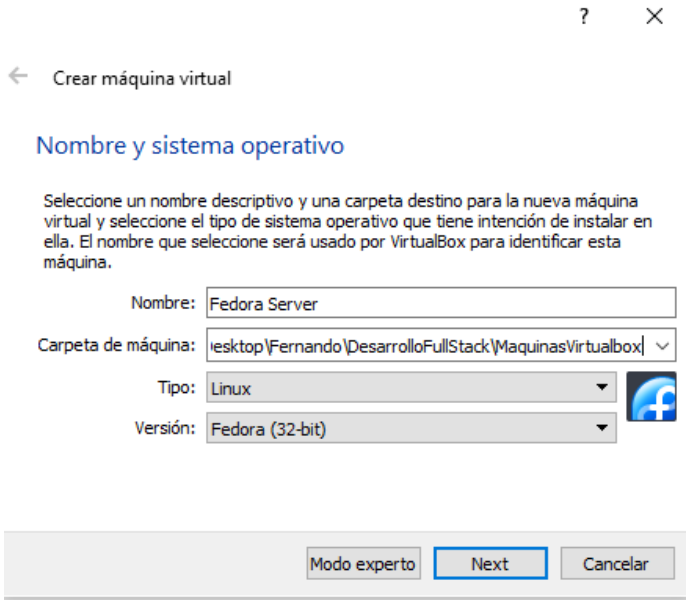


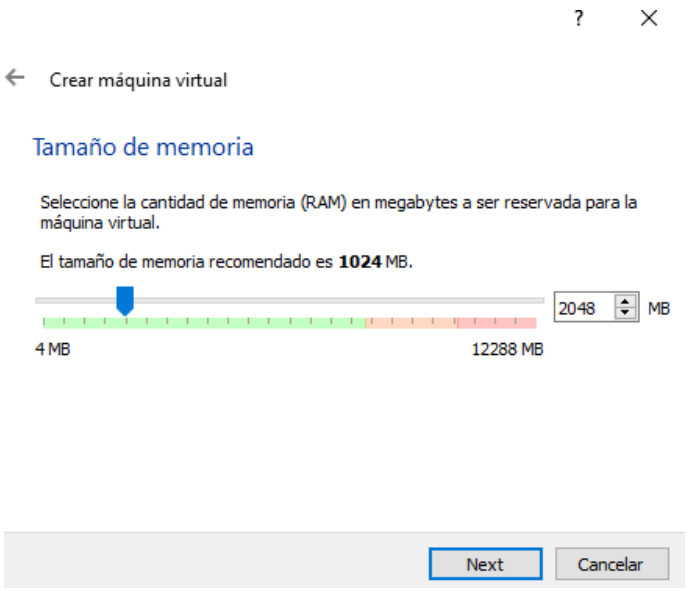

Oracle VM VirtualBox 6.1.32 Setup
Custom Setup
Select the way you want features to be installed.
Click on the icons in the tree below to change the way features will be installed.
VirtualBox Application
VirtualBox USB Support
VirtualBox Networking
VirtualBox Bridge
VirtualBox Host-C
VirtualBox Python 2.x Su
Oracle VM VirtualBox 6.1.32 application.
This feature requires 217MB on your hard drive. It has 3 of 3 subfeatures selected. The subfeatures require 932KB on yo...
Location:
C:\Program Files\Oracle\VirtualBox\
Browse
Version 6.1.32
Disk Usage
< Back
Next >
Cancel

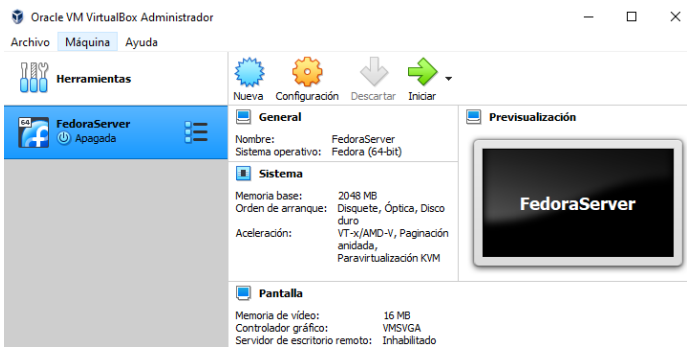

Oracle VM VirtualBox 6.1.32 Setup
Oracle VM VirtualBox 6.1.32
Please wait while the Setup Wizard installs Oracle VM VirtualBox 6.1.32. This may take several minutes.
Status:
Version 6.1.32
< Back
Next >
Cancel

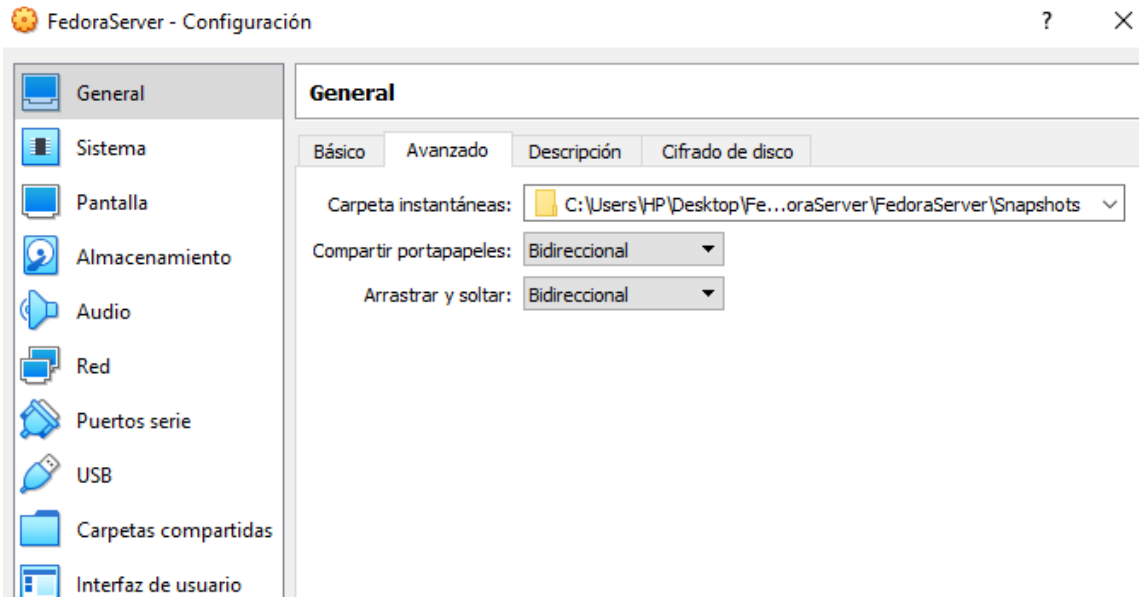
2. Sistema operativo Fedora Server 33.

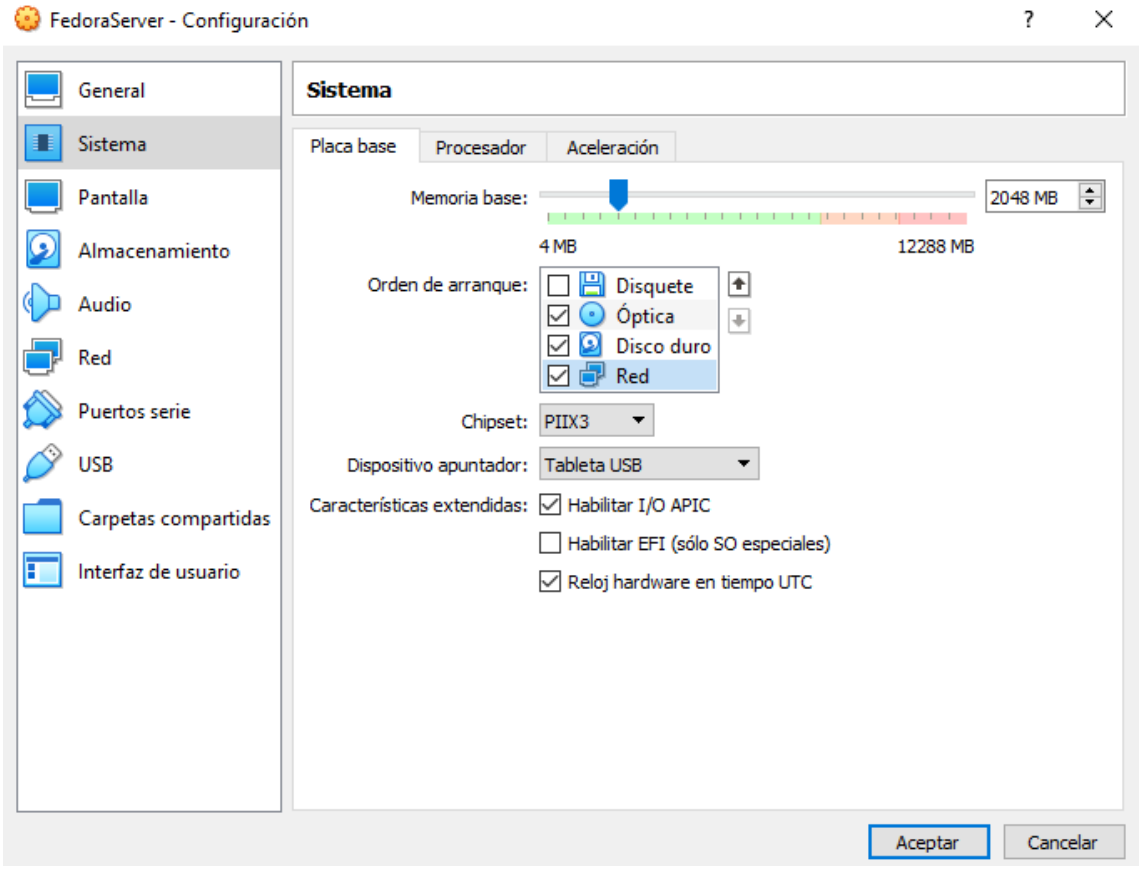
Descargo la ISO de su página oficial y posteriormente creo una maquina VirtualBox con esta ISO:

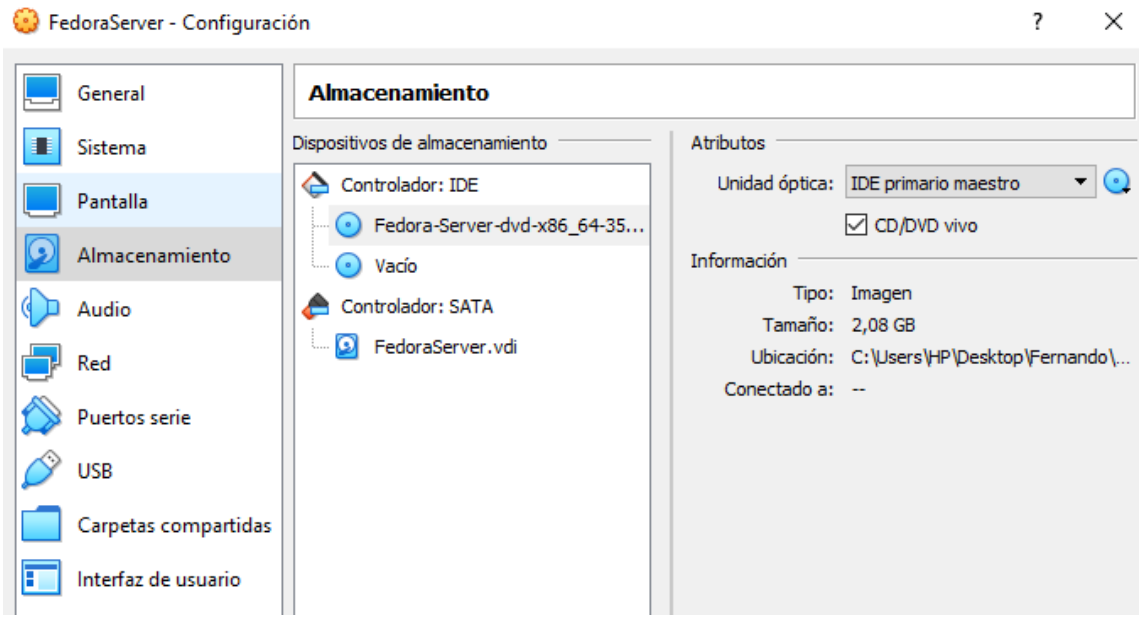

Crear máquina virtual
Nombre y sistema operativo
Seleccione un nombre descriptivo y una carpeta destino para la nueva máquina virtual y seleccione el tipo de sistema operativo que tiene intención de instalar en ella. El nombre que seleccione será usado por VirtualBox para identificar esta máquina.
Nombre: Fedora Server
Carpeta de máquina: esktop\Fernando\DesarrolloFullStack\MaquinasVirtualbox
Tipo: Linux
Versión: Fedora (32-bit)
Modo experto
Next
Cancelar

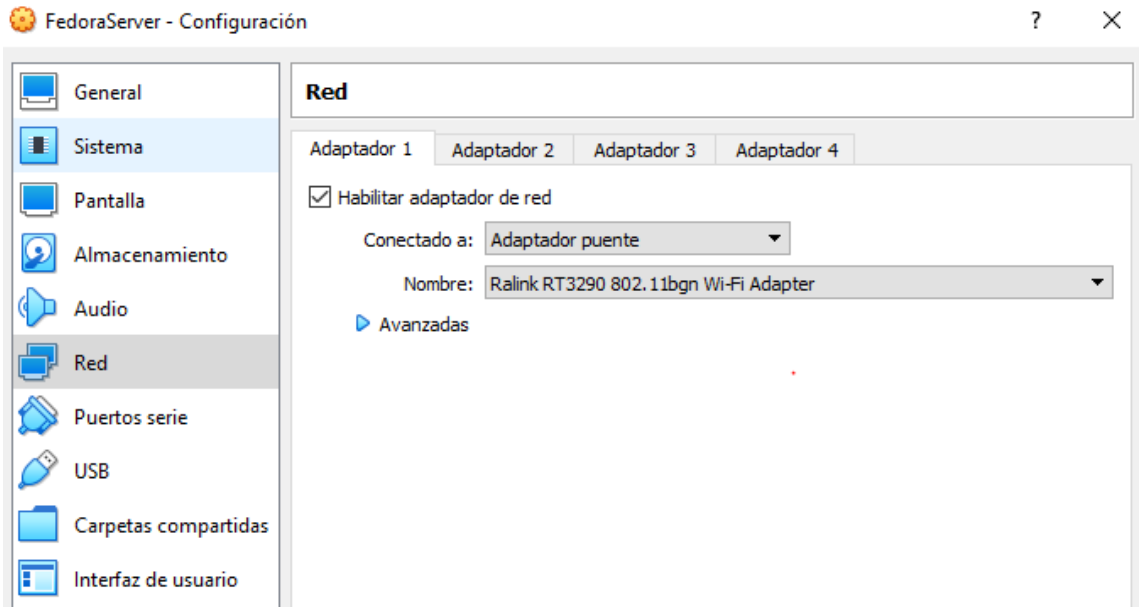

Crear máquina virtual
Tamaño de memoria
Seleccione la cantidad de memoria (RAM) en megabytes a ser reservada para la máquina virtual.
El tamaño de memoria recomendado es 1024 MB.
2048
MB
4 MB
12288 MB
Next
Cancelar


Oracle VM VirtualBox Administrador
Archivo
Máquina
Ayuda
Herramientas
Nueva
Configuración
Descartar
Iniciar
FedoraServer
Apagada
General
Nombre: FedoraServer
Sistema operativo: Fedora (64-bit)
Sistema
Memoria base: 2048 MB
Orden de arranque: Disquete, Óptica, Disco duro
Aceleración: VT-x/AMD-V, Paginación anidada, Paravirtualización KVM
Pantalla
Memoria de vídeo: 16 MB
Controlador gráfico: VMSVGA
Servidor de escritorio remoto: Inhabilitado
Previsualización
FedoraServer

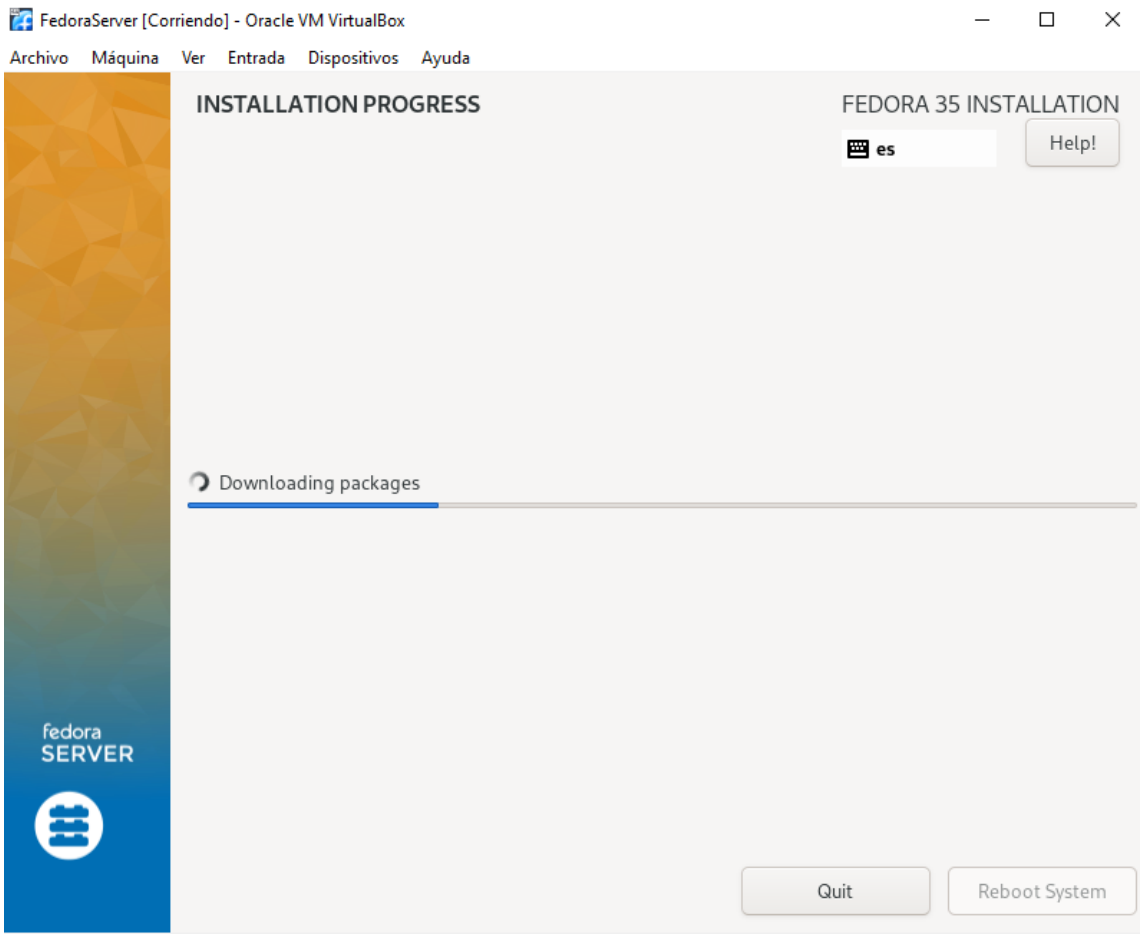

FedoraServer - Configuración
General
Sistema
Pantalla
Almacenamiento
Audio
Red
Puertos serie
USB
Carpetas compartidas
Interfaz de usuario
General
Básico
Avanzado
Descripción
Cifrado de disco
Carpeta instantáneas:
C:\Users\HP\Desktop\Fe...oraServer\FedoraServer\Snapshots
Compartir portapapeles:
Bidireccional
Arrastrar y soltar:
Bidireccional

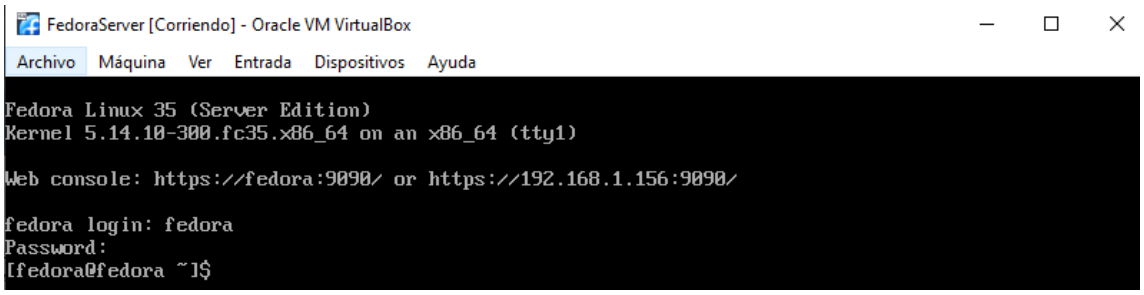

FedoraServer - Configuración
General
Sistema
Pantalla
Almacenamiento
Audio
Red
Puertos serie
USB
Carpetas compartidas
Interfaz de usuario
Sistema
Placa base
Procesador
Aceleración
Memoria base:
2048 MB
4 MB
12288 MB
Orden de arranque:
Disquete
Óptica
Disco duro
Red
Chipset:
PIIX3
Dispositivo apuntador:
Tableta USB
Características extendidas:
Habilitar I/O APIC
Habilitar EFI (sólo SO especiales)
Reloj hardware en tiempo UTC
Aceptar
Cancelar





En los anteriores pasos a la siguiente captura especifico el idioma que quiero instalar junto a la distribución de teclado y también creo un usuario administrador y añado una contraseña para el usuario Root.





3. Mysql 8.

En las siguientes capturas muestro la instalación de mysql server para fedora server 35:

Importo repositorio a fedora:

```
[fedora@fedora ~]$ sudo dnf install -y https://dev.mysql.com/get/mysql80-community-release-fc35-2s.noarch.rpm
```

Instalo mysql:

```
[fedora@fedora ~]$ sudo dnf install -y community-mysql-server
```

Inicio el servicio:

```
[fedora@fedora ~]$ sudo systemctl start mysqld
```

Compruebo que mysql este iniciado:

```
[fedora@fedora ~]$ systemctl status mysqld
● mysqld.service - MySQL 8.0 database server
     Loaded: loaded (/usr/lib/systemd/system/mysqld.service; disabled; vendor preset: disa>
     Active: active (running) since Mon 2022-01-31 11:45:34 CET; 23s ago
    Process: 3267 ExecStartPre=/usr/libexec/mysql-check-socket (code=exited, status=0/SUCC>
    Process: 3289 ExecStartPre=/usr/libexec/mysql-prepare-db-dir mysqld.service (code=exit>
   Main PID: 3376 (mysqld)
     Status: "Server is operational"
      Tasks: 38 (limit: 2310)
     Memory: 413.3M
        CPU: 9.963s
     CGroup: /system.slice/mysqld.service
             └─3376 /usr/libexec/mysqld --basedir=/usr
```

Activo el servicio automático:

```
[fedora@fedora ~]$ sudo systemctl enable mysqld
Created symlink /etc/systemd/system/multi-user.target.wants/mysqld.service → /usr/lib/syste
md/system/mysqld.service.
```

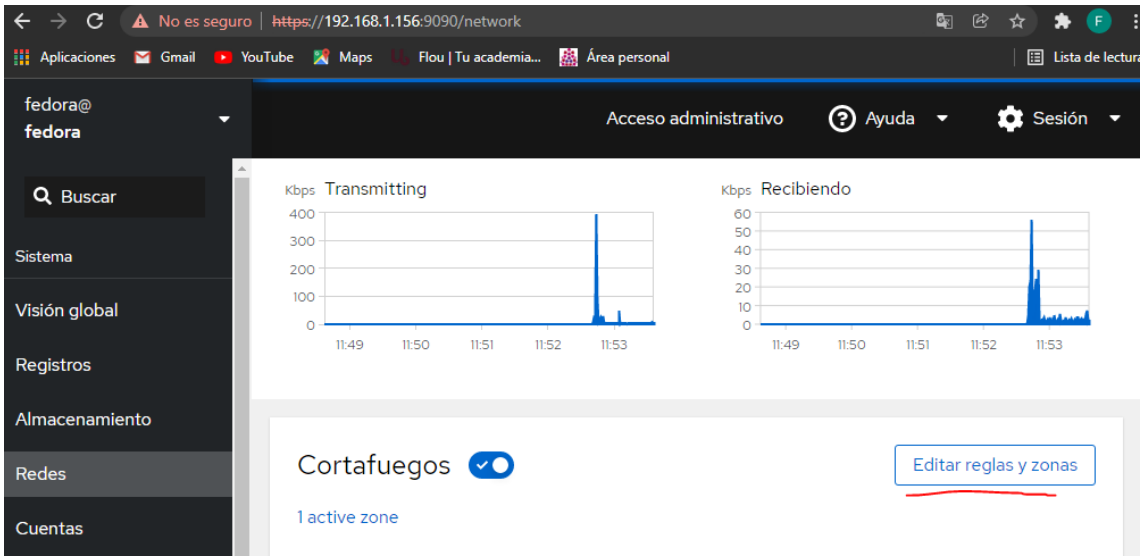
Abro el puerto de comunicaciones:

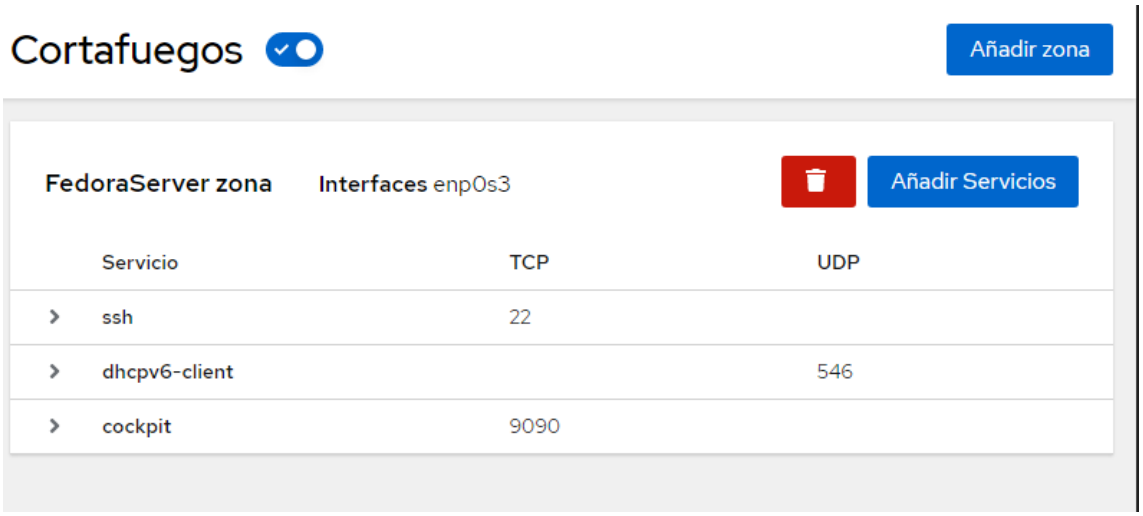
```
[fedora@fedora ~]$ firewall-cmd --permanent --zone=public --add-service=mysql
success
```

Reinicio el Firewall:

```
[fedora@fedora ~]$ systemctl restart firewalld.service
```

Abro el puerto 3306 en firewall en 192.168.1.156:9090/network:





Obtengo el password generado:

```
[root@fedora fedora]# grep 'A temporary password is generated for root@localhost' /
var/log/mysqld.log
2022-01-31T11:51:35.567262Z 6 [Note] [MY-010454] [Server] A temporary password is g
enerated for root@localhost: ye)hx-/uf5hU
```

Reasigno los permisos de acceso:

```
[root@fedora fedora]# su -
```

```
[root@fedora ~]# /usr/bin/mysql_secure_installation
```

```
[root@fedora ~]# /usr/bin/mysql_secure_installation

Securing the MySQL server deployment.

Enter password for user root:
```

```
New password:

Re-enter new password:
The 'validate_password' component is installed on the server.
The subsequent steps will run with the existing configuration
of the component.
Using existing password for root.

Estimated strength of the password: 100
Change the password for root ? ((Press y|Y for Yes, any other key for No) : y
```

```
New password:

Re-enter new password:

Estimated strength of the password: 100
Do you wish to continue with the password provided?(Press y|Y for Yes, any other ke
y for No) : y
By default, a MySQL installation has an anonymous user,
allowing anyone to log into MySQL without having to have
a user account created for them. This is intended only for
testing, and to make the installation go a bit smoother.
You should remove them before moving into a production
environment.

Remove anonymous users? (Press y|Y for Yes, any other key for No) : n
```

```
 ... skipping.


Normally, root should only be allowed to connect from
'localhost'. This ensures that someone cannot guess at
the root password from the network.

Disallow root login remotely? (Press y|Y for Yes, any other key for No) : n

 ... skipping.
By default, MySQL comes with a database named 'test' that
anyone can access. This is also intended only for testing,
and should be removed before moving into a production
environment.
```

```
Remove test database and access to it? (Press y|Y for Yes, any other key for No) :
n

 ... skipping.
Reloading the privilege tables will ensure that all changes
made so far will take effect immediately.

Reload privilege tables now? (Press y|Y for Yes, any other key for No) : y
Success.

All done!
[root@fedora ~]#
```

Inicio la sesión root en mysql:

```
[root@fedora ~]# mysql -h localhost -u root -p
Enter password:
Welcome to the MySQL monitor.  Commands end with ; or \g.
Your MySQL connection id is 15
Server version: 8.0.28 MySQL Community Server - GPL

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affiliates. Other names may be trademarks of their respective
owners.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

mysql>
```

Creo el usuario remote:

```
mysql> create user 'remote'@'%' identified with mysql_native_password by 'Fedora_22';
Query OK, 0 rows affected (0.02 sec)
```

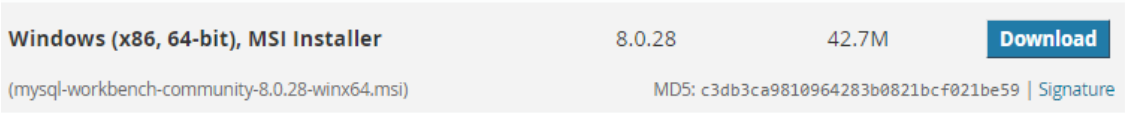
Doy privilegios al usuario remote:

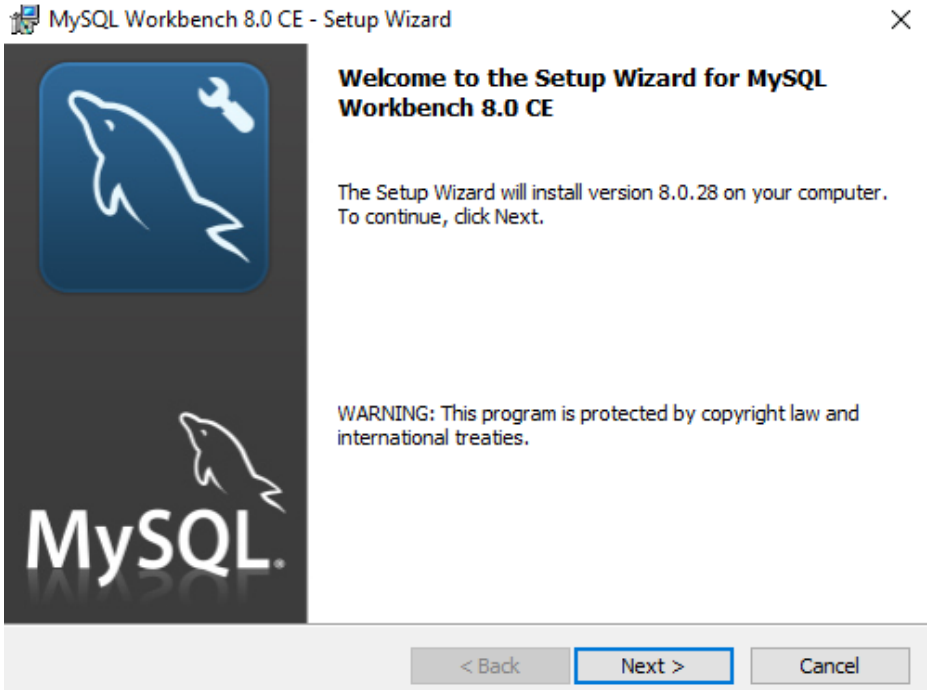
```
mysql> grant all privileges on *.* to 'remote'@'%';
Query OK, 0 rows affected (0.08 sec)
```

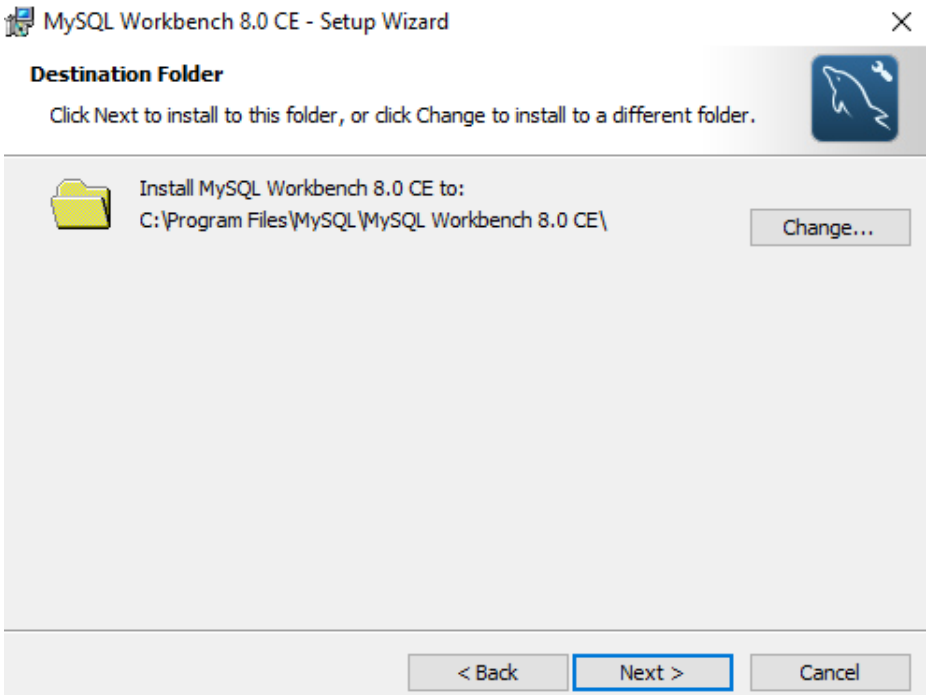
```
mysql> flush privileges;
Query OK, 0 rows affected (0.13 sec)
```

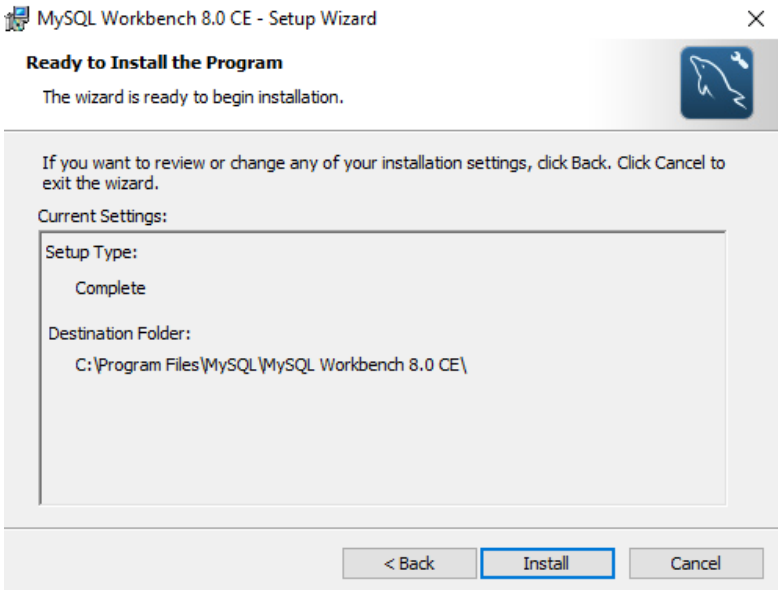
4. MysqlWorkbench.

Instalo MysqlWorkbench en la máquina local:




MySQL Workbench 8.0 CE - Setup Wizard
Welcome to the Setup Wizard for MySQL Workbench 8.0 CE
The Setup Wizard will install version 8.0.28 on your computer. To continue, click Next.
WARNING: This program is protected by copyright law and international treaties.
MySQL
< Back
Next >
Cancel


MySQL Workbench 8.0 CE - Setup Wizard
Destination Folder
Click Next to install to this folder, or click Change to install to a different folder.
Install MySQL Workbench 8.0 CE to:
C:\Program Files\MySQL\MySQL Workbench 8.0 CE\
Change...
< Back
Next >
Cancel



Welcome to MySQL Workbench

MySQL Workbench is the official graphical user interface (GUI) tool for MySQL. It allows you to design, create and browse your database schemas, work with database objects and insert data as well as design and run SQL queries to work with stored data. You can also migrate schemas and data from other database vendors to your MySQL database.

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