

# Instalacion del S.O

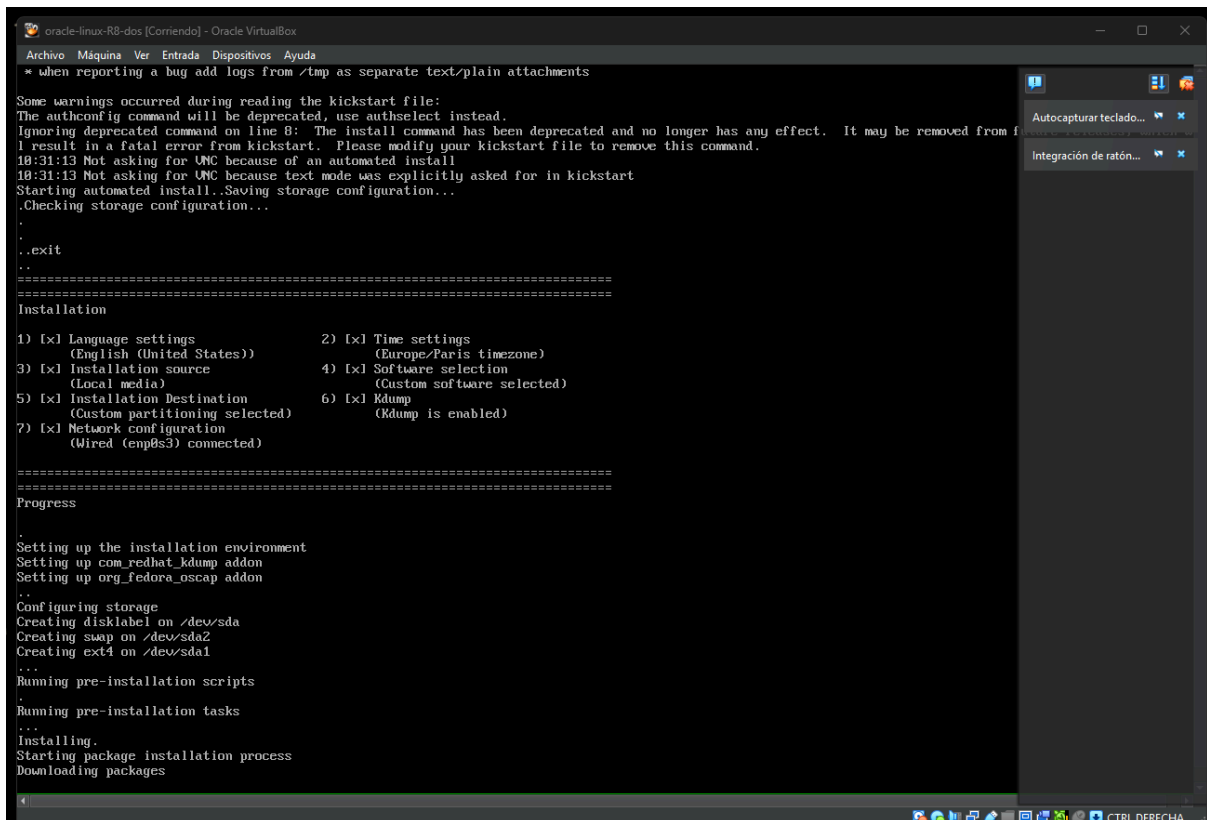
Primero creamos una maquina virtual, con los siguientes requisitos:

4gb de ram

20 gb de disco duro

2 núcleos (Opcional, es para que vaya mas rapido, le puedes poner 1 nucleo, y le damos a iniciar)

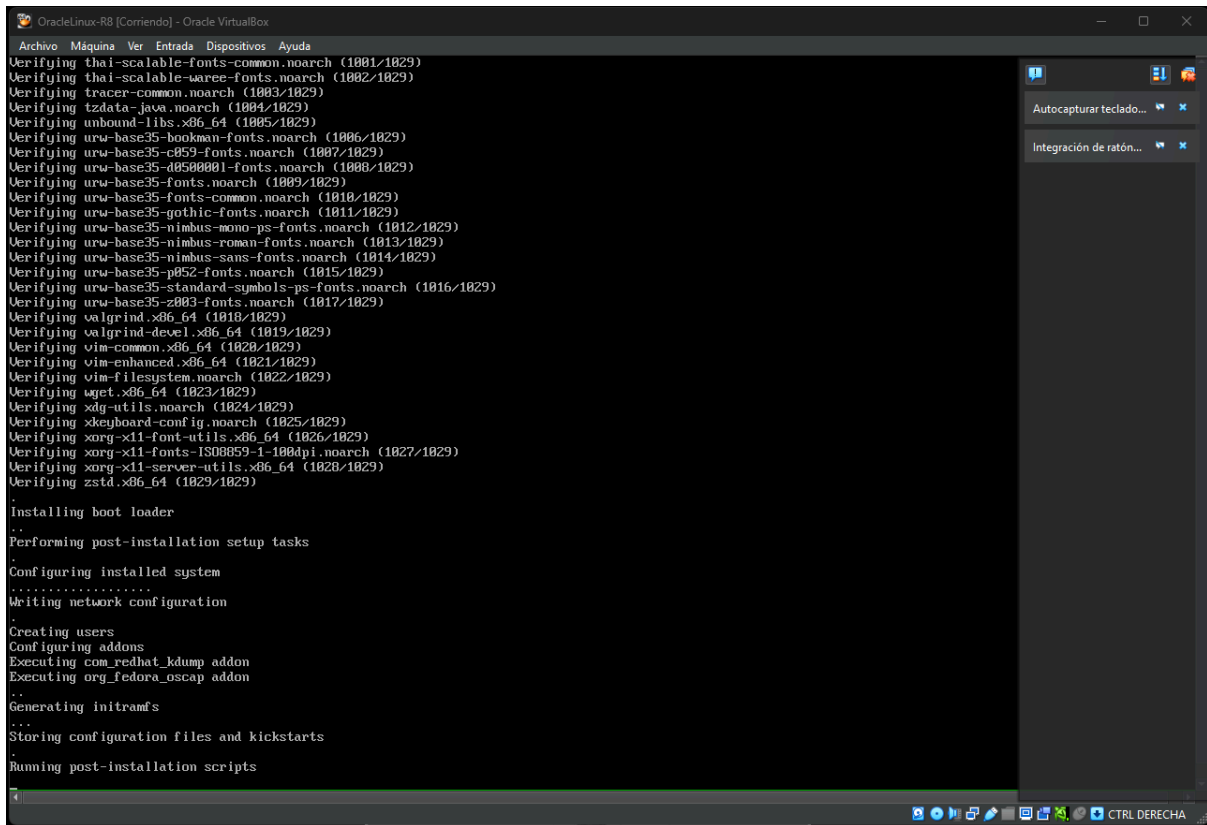
Una vez iniciamos la maquina, dejamos que cargue todos los scripts iniciales que tiene la ISO, y esperamos.



```
oracle-linux-R8-dos [Corriendo] - Oracle VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
* when reporting a bug add logs from /tmp as separate text/plain attachments

Some warnings occurred during reading the kickstart file:
The authconfig command will be deprecated, use authselect instead.
Ignoring deprecated command on line 8: The install command has been deprecated and no longer has any effect. It may be removed from f
l result in a fatal error from kickstart. Please modify your kickstart file to remove this command.
18:31:13 Not asking for UNC because of an automated install
18:31:13 Not asking for UNC because text mode was explicitly asked for in kickstart
Starting automated install..Saving storage configuration...
Checking storage configuration...
.
..exit
..
=====
Installation
1) [x] Language settings          2) [x] Time settings
   (English (United States))      (Europe/Paris timezone)
3) [x] Installation source        4) [x] Software selection
   (Local media)                  (Custom software selected)
5) [x] Installation Destination  6) [x] Kdump
   (Custom partitioning selected) (Kdump is enabled)
7) [x] Network configuration
   (Wired (enp8s3) connected)

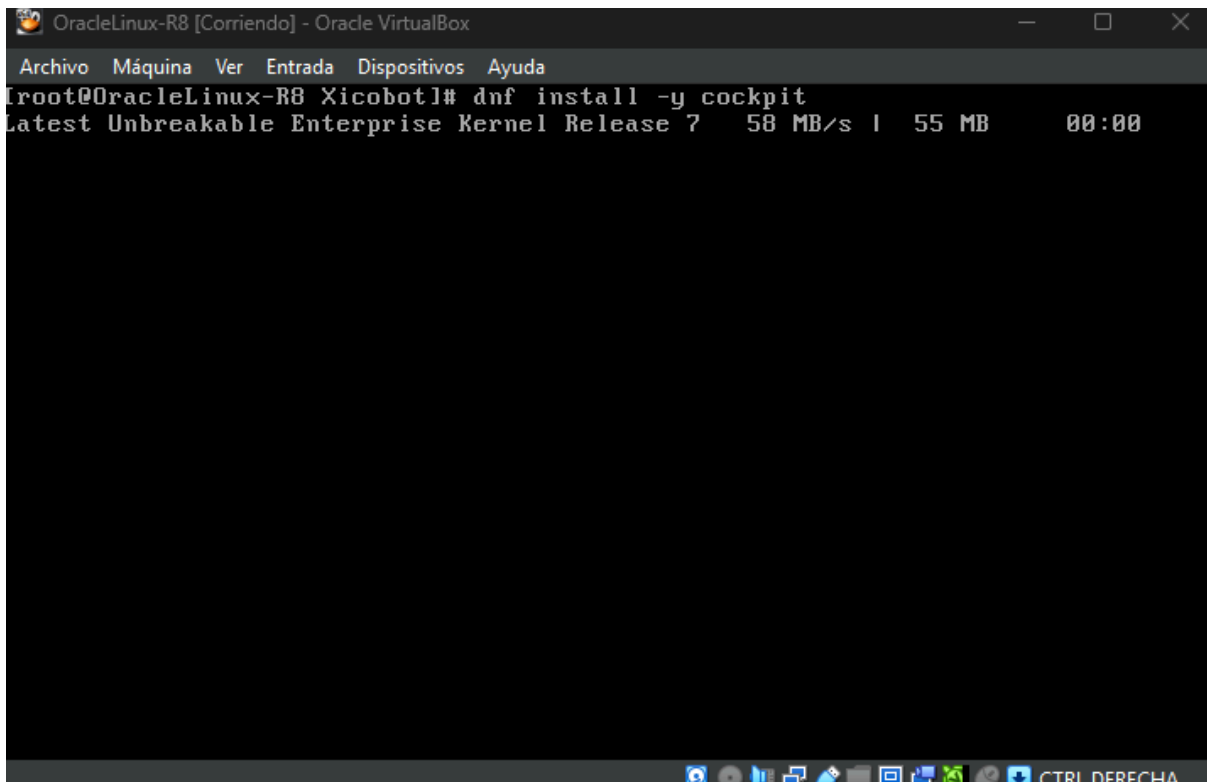
=====
Progress
.
Setting up the installation environment
Setting up com.redhat.kdump addon
Setting up org.fedora.oscap addon
..
Configuring storage
Creating disklabel on /dev/sda
Creating swap on /dev/sda2
Creating ext4 on /dev/sda1
...
Running pre-installation scripts
Running pre-installation tasks
...
Installing
Starting package installation process
Downloading packages
```



(Nos logueamos como root)

Una vez esté, primero instalaremos el cockpit, para ello usaremos el siguiente comando:

`dnf install -y cockpit`



y esperamos a que se complete.

```
OracleLinux-R8 [Corriendo] - Oracle VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
=====
Upgrade 1 Package

Total download size: 90 k
Downloading Packages:
cockpit-310.4-1.0.1.el8_10.x86_64.rpm          1.4 MB/s | 90 kB      00:00
-----
Total                                          1.3 MB/s | 90 kB      00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Upgrading      : cockpit-310.4-1.0.1.el8_10.x86_64 1/2
  Cleanup        : cockpit-300.1-1.0.1.el8_9.x86_64 2/2
  Running scriptlet: cockpit-300.1-1.0.1.el8_9.x86_64 2/2
  Verifying      : cockpit-310.4-1.0.1.el8_10.x86_64 1/2
  Verifying      : cockpit-300.1-1.0.1.el8_9.x86_64 2/2

Upgraded:
cockpit-310.4-1.0.1.el8_10.x86_64

Complete!
[root@OracleLinux-R8 Xicobot]#
```

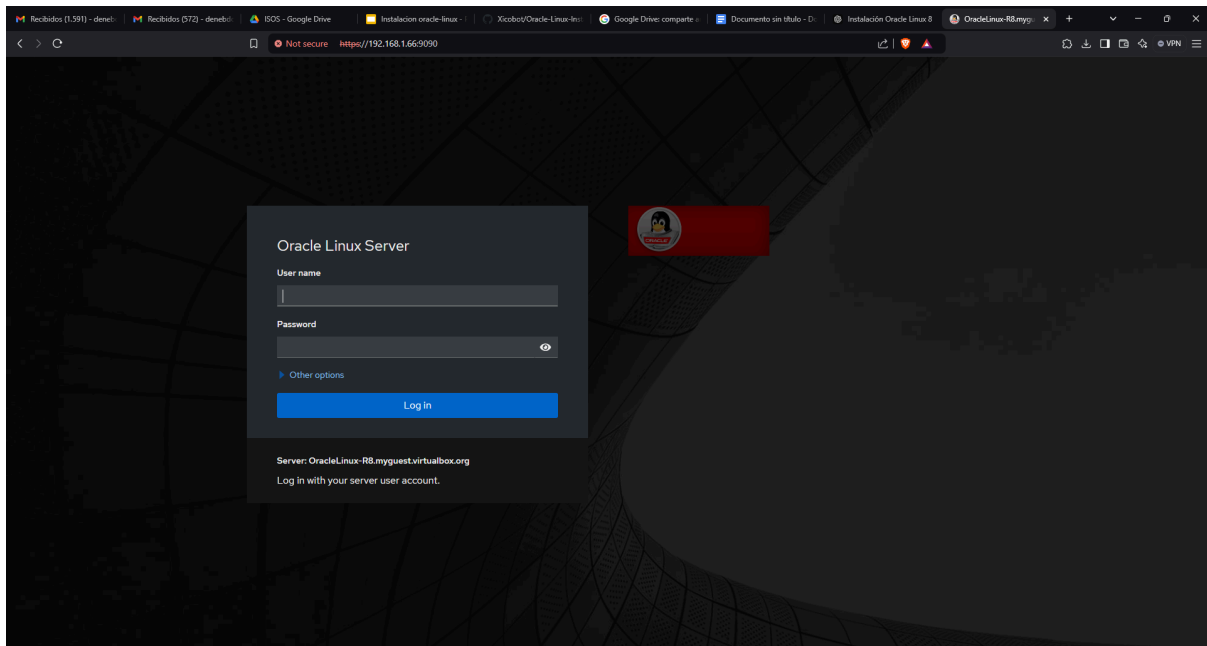
Luego le ponemos el comando:  
systemctl enable --now cockpit.socket  
systemctl enable cockpit

```
OracleLinux-R8 [Corriendo] - Oracle VirtualBox
Archivo  Máquina  Ver  Entrada  Dispositivos  Ayuda
=====
Total download size: 90 k
Downloading Packages:
cockpit-310.4-1.0.1.el8_10.x86_64.rpm          1.4 MB/s | 90 kB      00:00
-----
Total                                          1.3 MB/s | 90 kB      00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                1/1
  Upgrading      : cockpit-310.4-1.0.1.el8_10.x86_64 1/2
  Cleanup        : cockpit-300.1-1.0.1.el8_9.x86_64 2/2
  Running scriptlet: cockpit-300.1-1.0.1.el8_9.x86_64 2/2
  Verifying      : cockpit-310.4-1.0.1.el8_10.x86_64 1/2
  Verifying      : cockpit-300.1-1.0.1.el8_9.x86_64 2/2

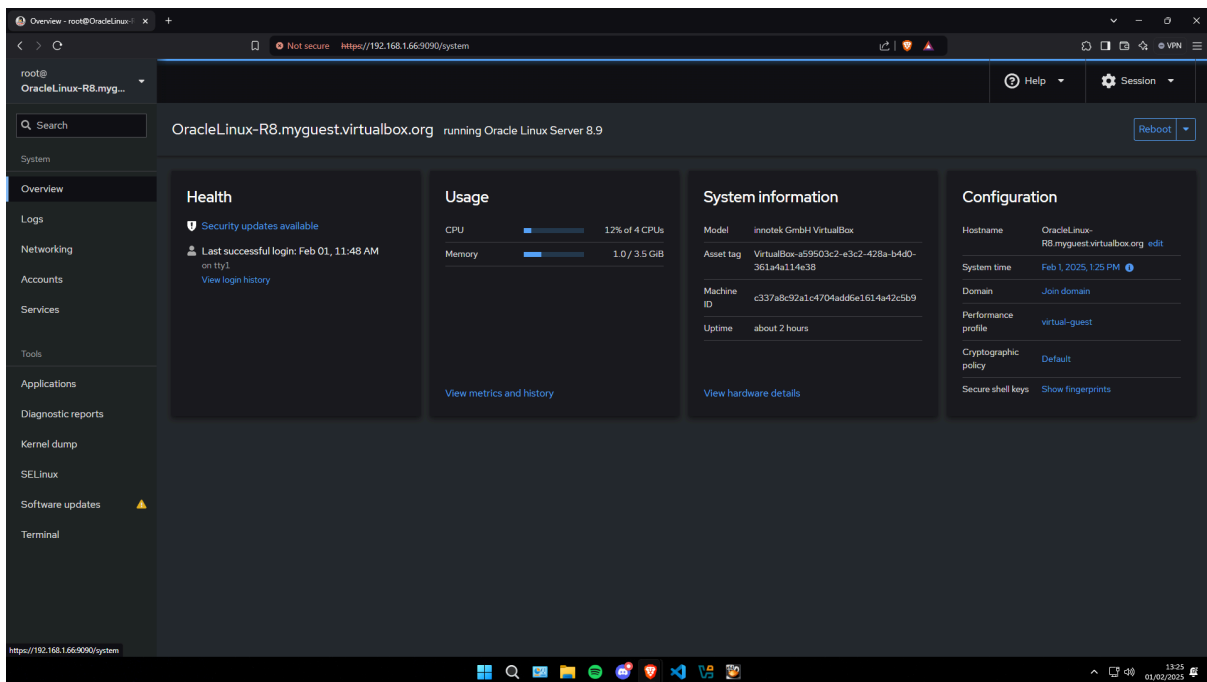
Upgraded:
cockpit-310.4-1.0.1.el8_10.x86_64

Complete!
[root@OracleLinux-R8 Xicobot]# systemctl enable --now cockpit.socket
Created symlink /etc/systemd/system/sockets.target.wants/cockpit.socket → /usr/lib/systemd/system/cockpit.socket.
[root@OracleLinux-R8 Xicobot]#
```

Una vez esto, abrimos el navegador, y podremos entrar en la base de datos a través del cockpit:



https:ip del servidor:9090



A partir de este punto, haré las cosas por la terminal de la interfaz web.

## Instalación de sqlplus

Para ello, haremos uso de los repositorios de oracle, los cuales instalaremos con el siguiente comando:

```
sudo dnf install -y oraclelinux-release-el8
```

```
sudo dnf config-manager --set-enabled ol8_oracle_instantclient
```

```
[root@OracleLinux-R8 ~]# sudo dnf install -y oraclelinux-release-el8
Last metadata expiration check: 2:03:20 ago on Sat 01 Feb 2025 12:22:26 PM CET.
Package oraclelinux-release-el8-1.0-35.el8.x86_64 is already installed.
Dependencies resolved.
=====
Package                                Architecture      Version           Repository        Size
-----
Upgrading:
oraclelinux-release-el8                x86_64            1.0-38.el8        ol8_baseos_latest 21 k
Transaction Summary
-----
Upgrade 1 Package
Total download size: 21 k
Downloading Packages:
oraclelinux-release-el8-1.0-38.el8.x86_64.rpm                                212 kB/s | 21 kB  00:00
-----
Total                                                                    198 kB/s | 21 kB  00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing      :                                     1/1
  Upgrading      : oraclelinux-release-el8-1.0-38.el8.x86_64 1/2
  Running scriptlet: oraclelinux-release-el8-1.0-38.el8.x86_64 1/2
  Cleanup        : oraclelinux-release-el8-1.0-35.el8.x86_64 2/2
  Verifying      : oraclelinux-release-el8-1.0-38.el8.x86_64 1/2
  Verifying      : oraclelinux-release-el8-1.0-35.el8.x86_64 2/2

Upgraded:
oraclelinux-release-el8-1.0-38.el8.x86_64

Complete!
[root@OracleLinux-R8 ~]# sudo dnf config-manager --set-enabled ol8_oracle_instantclient
Error: No matching repo to modify: ol8_oracle_instantclient.
[root@OracleLinux-R8 ~]#
[root@OracleLinux-R8 ~]#
```

Limpiaremos un poco el caché de dnf, para que no se nos quede archivos basura y lo forzaremos a la regeneración de la caché de metadatos de los repositorios habilitados.

```
[root@OracleLinux-R8 ~]# sudo dnf clean all
42 files removed
[root@OracleLinux-R8 ~]# sudo dnf makecache
Extra Packages for Enterprise Linux 8 - x86_64                                12 MB/s | 14 MB  00:01
Oracle Linux 8 BaseOS Latest (x86_64)                                         54 MB/s | 87 MB  00:01
Oracle Linux 8 Application Stream (x86_64)                                     50 MB/s | 67 MB  00:01
Latest Unbreakable Enterprise Kernel Release 7 for Oracle Linux 8 (x86_64)    30 MB/s | 55 MB  00:01
Last metadata expiration check: 0:00:08 ago on Sat 01 Feb 2025 02:27:50 PM CET.
Metadata cache created.
[root@OracleLinux-R8 ~]#
```

Una vez hecho esto, instalaremos el paquete de sqlplus a traves del WGET

```
[root@OracleLinux-R8 ~]# wget https://download.oracle.com/otn_software/linux/instantclient/2111000/oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64.rpm
--2025-02-01 14:50:21-- https://download.oracle.com/otn_software/linux/instantclient/2111000/oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64.rpm
Resolving download.oracle.com (download.oracle.com)... 23.14.136.105
Connecting to download.oracle.com (download.oracle.com)|23.14.136.105|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 728100 (711K) [application/x-redhat-package-manager]
Saving to: 'oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64.rpm'

oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_ 100%[=====>] 711.04K --.-KB/s in 0.06s

2025-02-01 14:50:23 (11.1 MB/s) - 'oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64.rpm' saved [728100/728100]

[root@OracleLinux-R8 ~]#
```

y ahora lo instalaremos con el comando dnf install -y oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86\_64.rpm

```
[root@OracleLinux-R8 ~]# dnf install -y oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64.rpm
Last metadata expiration check: 0:27:01 ago on Sat 01 Feb 2025 02:27:50 PM CET.
Package oracle-instantclient-sqlplus-21.11.0.0.0-1.el8.x86_64 is already installed.
Dependencies resolved.
Nothing to do.
Complete!
[root@OracleLinux-R8 ~]#
```

# Instalación base de datos

Para ello, pondremos el comando  
sudo dnf install -y oracle-database-preinstall-21c

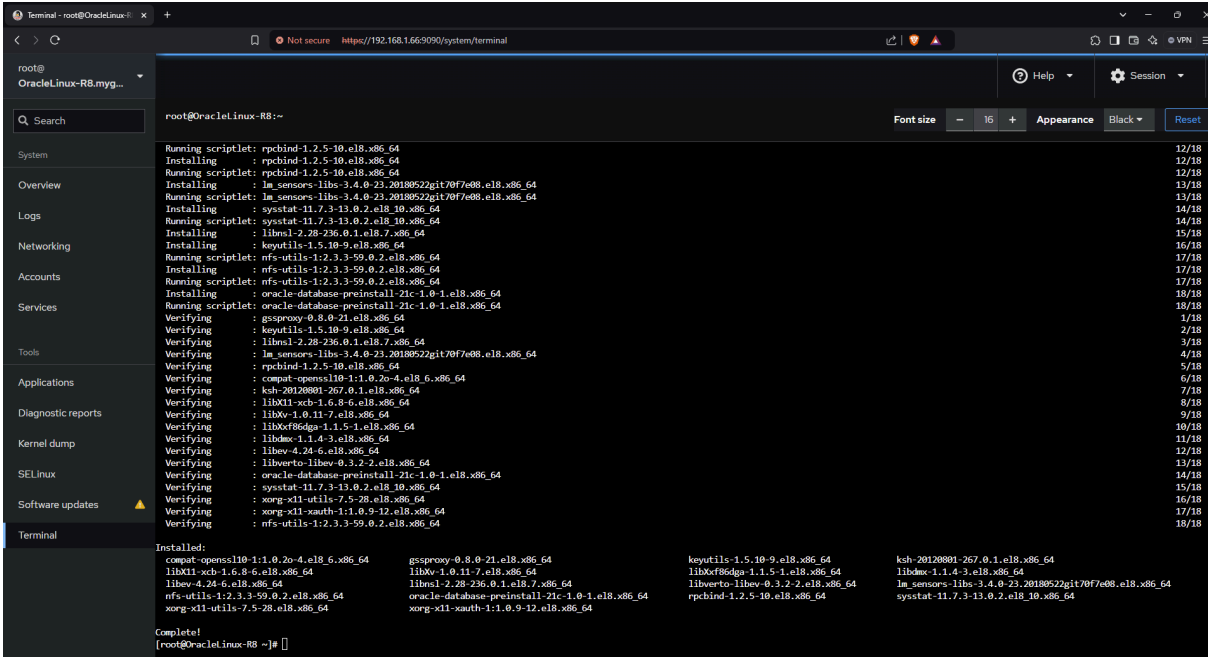
```
[root@OracleLinux-R8 ~]# sudo dnf install -y oracle-database-preinstall-21c
^[[D*[[Last metadata expiration check: 1:03:35 ago on Sat 01 Feb 2025 12:22:26 PM CET.
Dependencies resolved.

Package                               Architecture      Version            Repository          Size
-----
Installing:
oracle-database-preinstall-21c        x86_64            1.0-1.el8          ol8_appstream       30 k
Installing dependencies:
compat-openssl10                      x86_64            1:1.0.2o-4.el8_6   ol8_appstream       1.1 M
gssproxy                              x86_64            0.8.0-21.el8       ol8_baseos_latest   119 k
keyutils                              x86_64            1.5.10-9.el8       ol8_baseos_latest   66 k
ksh                                   20120801-267.0.1.el8 ol8_appstream      923 k
libX11-xcb                            x86_64            1.6.8-6.el8        ol8_appstream       14 k
libXv                                 x86_64            1.0.11-7.el8       ol8_appstream       20 k
libXtst                              x86_64            1.1.5-1.el8        ol8_appstream       26 k
libXtst                              x86_64            1.1.4-3.el8        ol8_appstream       22 k
libbev                               x86_64            4.24-6.el8         ol8_appstream       52 k
libbsl                               x86_64            2.28-236.0.1.el8_7 ol8_baseos_latest   109 k
libbvtro-libev                       x86_64            0.3.2-2.el8        ol8_appstream       16 k
lm_sensors-libs                      x86_64            3.4.0-23.20180522git70f7e08.el8 ol8_baseos_latest   59 k
nfs-utils                            x86_64            1:2.3.3-59.0.2.el8 ol8_UEK7            516 k
rpcbind                              x86_64            1.2.5-10.el8       ol8_baseos_latest   70 k
sysstat                              x86_64            11.7.3-13.0.2.el8_10 ol8_appstream      427 k
xorg-x11-utils                       x86_64            7.5-28.el8         ol8_appstream       136 k
xorg-x11-xauth                       x86_64            1:1.0.9-12.el8     ol8_appstream       39 k

Transaction Summary
-----
Install      18 Packages

Total download size: 3.7 M
Installed size: 10 M
Downloading Packages:
(1/18): libbsl-2.28-236.0.1.el8_7.x86_64.rpm                          1.0 MB/s | 109 kB  00:00
(2/18): lm_sensors-libs-3.4.0-23.20180522git70f7e08.el8.x86_64.rpm    2.6 MB/s | 59 kB  00:00
(3/18): gssproxy-0.8.0-21.el8.x86_64.rpm                              849 kB/s | 119 kB  00:00
(4/18): keyutils-1.5.10-9.el8.x86_64.rpm                             474 kB/s | 66 kB  00:00
(5/18): rpcbind-1.2.5-10.el8.x86_64.rpm                               3.1 MB/s | 70 kB  00:00
(6/18): libX11-xcb-1.6.8-6.el8.x86_64.rpm                             613 kB/s | 14 kB  00:00
(7/18): compat-openssl10-1.0.2o-4.el8_6.x86_64.rpm                   16 MB/s | 1.1 MB  00:00
(8/18): libXv-1.0.11-7.el8.x86_64.rpm                                554 kB/s | 20 kB  00:00
```

y esperamos a que se complete.



Este comando es para preinstalar la base de datos, ahora tenemos que descargarla nosotros mismos desde la propia pagina de oracle:

[Oracle Database 21c Express Edition for Linux x64 \( OL8 \)](#)

Oracle Database Express Edition

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### Oracle Database 21c Express Edition


Download	Description
 <a href="#">Oracle Database 21c Express Edition for Windows x64</a>	(1,967,615,483 bytes - October 08, 2021) [Sha256sum: 939742c3305c466566a55f607638621b6aa7033a
 <a href="#">Oracle Database 21c Express Edition for Linux x64 ( OL8 )</a>	(2,339,651,768 bytes - September 08, 2021) [Sha256sum: f8357b432de33478549a76557e8c5220ec243710
 <a href="#">Oracle Database 21c Express Edition for Linux x64 ( OL7 )</a>	(2,339,017,432 bytes - September 08, 2021) [Sha256sum: 4c8f40a19d4d1a2f00e46df022943a04cc13fe62a

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Talk to sales

Una vez hecho estó, tendremos que pasarle el archivo instalado a la maquina de oracle, en mi caso usare el ssh.

```
[root@OracleLinux-R8 ~]# dnf install ss
Display all 551 possibilities? (y or n)
[root@OracleLinux-R8 ~]# dnf install openssh-server
Last metadata expiration check: 1:14:47 ago on Sat 01 Feb 2025 12:22:26 PM CET.
Package openssh-server-8.0p1-19.el8_8.x86_64 is already installed.
Dependencies resolved.

Package                                Architecture      Version           Repository        Size
-----
Upgrading:
openssh                                x86_64            8.0p1-25.0.1.el8_10 ol8_baseos_latest 525 k
openssh-clients                        x86_64            8.0p1-25.0.1.el8_10 ol8_baseos_latest 645 k
openssh-server                         x86_64            8.0p1-25.0.1.el8_10 ol8_baseos_latest 494 k

Transaction Summary
-----
Upgrade 3 Packages

Total download size: 1.6 M
Is this ok [y/N]: y
Downloading Packages:
(1/3): openssh-server-8.0p1-25.0.1.el8_10.x86_64.rpm                3.0 MB/s | 494 kB  00:00
(2/3): openssh-8.0p1-25.0.1.el8_10.x86_64.rpm                    3.1 MB/s | 525 kB  00:00
(3/3): openssh-clients-8.0p1-25.0.1.el8_10.x86_64.rpm             3.5 MB/s | 645 kB  00:00
-----
Total                                                                8.7 MB/s | 1.6 MB  00:00

Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing : 1/1
  Running scriptlet: openssh-8.0p1-25.0.1.el8_10.x86_64 1/1
  Running scriptlet: openssh-8.0p1-25.0.1.el8_10.x86_64 1/6
  Upgrading : openssh-8.0p1-25.0.1.el8_10.x86_64 1/6
  Upgrading : openssh-clients-8.0p1-25.0.1.el8_10.x86_64 2/6
  Running scriptlet: openssh-server-8.0p1-25.0.1.el8_10.x86_64 3/6
  Upgrading : openssh-server-8.0p1-25.0.1.el8_10.x86_64 3/6
  Running scriptlet: openssh-server-8.0p1-25.0.1.el8_10.x86_64 3/6
  Running scriptlet: openssh-server-8.0p1-19.el8_8.x86_64 4/6
  Cleanup : openssh-server-8.0p1-19.el8_8.x86_64 4/6
  Running scriptlet: openssh-server-8.0p1-19.el8_8.x86_64 4/6
```

Una vez instalado, vamos al `/etc/ssh/sshd.conf` y modificamos la entrada del `PermitRootLogin` a `YES`.

```
root@OracleLinux-R8:~
GNU nano 2.9.8 /etc/ssh/sshd_config

#ListenAddress ::

HostKey /etc/ssh/ssh_host_rsa_key
HostKey /etc/ssh/ssh_host_ecdsa_key
#in FIPS mode fips19 keys are not supported, please comment out the next line
HostKey /etc/ssh/ssh_host_ed25519_key

# Ciphers and keying
#Rekeylimit default none

# This system is following system-wide crypto policy. The changes to
# crypto properties (ciphers, MACs, ...) will not have any effect here.
# They will be overridden by command-line options passed to the server
# on command line.
# Please, check manual pages for update-crypto-policies(8) and sshd_config(5).

# Logging
#SyslogFacility AUTH
SyslogFacility AUTHPRIV
#LogLevel INFO

# Authentication:

#LoginGraceTime 2m
PermitRootLogin yes
#StrictModes yes
#MaxAuthTries 6
#MaxSessions 10

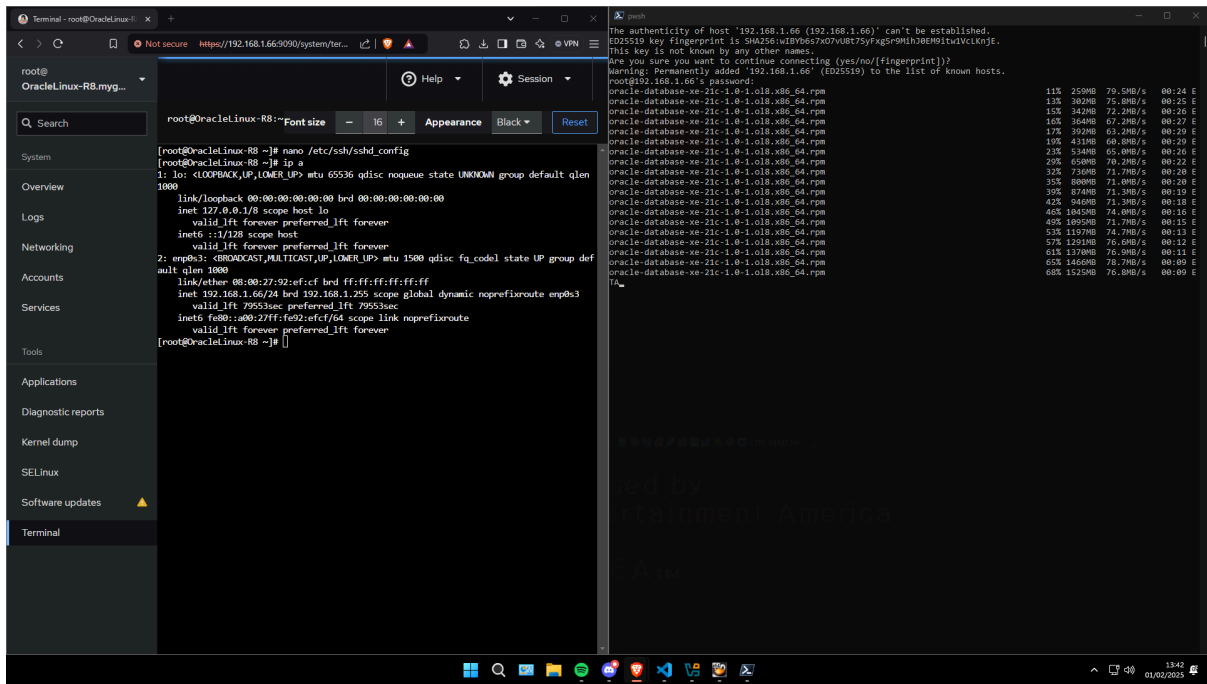
#PubkeyAuthentication yes

# The default is to check both .ssh/authorized_keys and .ssh/authorized_keys2
# but this is overridden so installations will only check .ssh/authorized_keys
AuthorizedKeysFile .ssh/authorized_keys

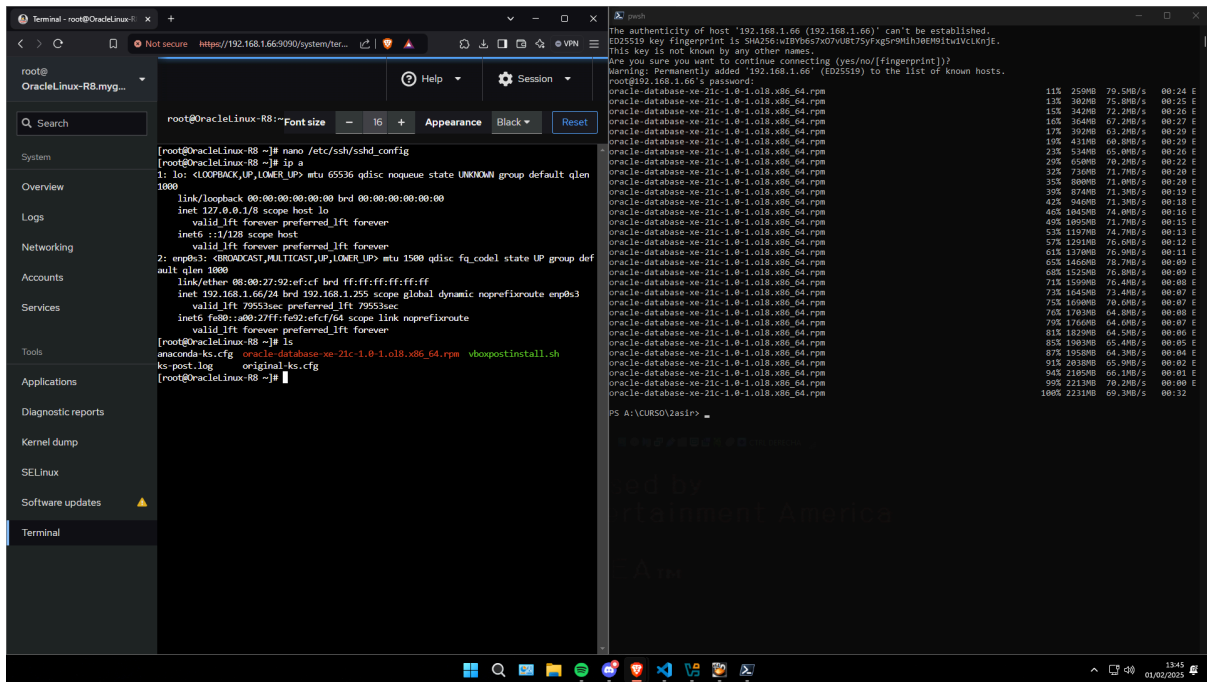
#AuthorizedPrincipalsFile none
```

Una vez esto, le pasamos la base de datos a traves de ssh:





Verificamos que se ha completado:



Y ahora para instalarla usaremos el comando `dnf install -y oracle-database-xe-21c-1.0-1.018.x86_64.rpm`

```
root@OracleLinux-R8.myg...
root@OracleLinux-R8:~
[root@OracleLinux-R8 ~]# ls
anaconda-ks.cfg  ks-post.log  oracle-database-xe-21c-1.0-1.x86_64.rpm  original-ks.cfg  vboxpostinstall.sh
[root@OracleLinux-R8 ~]# dnf install -y oracle-database-xe-21c-1.0-1.x86_64.rpm
Last metadata expiration check: 1:25:00 ago on Sat 01 Feb 2025 12:22:26 PM CET.
Dependencies resolved.
=====
Package                                Architecture      Version            Repository          Size
=====
Installing:
oracle-database-xe-21c                  x86_64            1.0-1              @commandline        2.2 G
=====
Transaction Summary
=====
Install 1 Package
Total size: 2.2 G
Installed size: 5.8 G
Downloading Packages:
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing :
Running scriptlet: oracle-database-xe-21c-1.0-1.x86_64
Installing : oracle-database-xe-21c-1.0-1.x86_64
Running scriptlet: oracle-database-xe-21c-1.0-1.x86_64
[INFO] Executing post installation scripts...
[INFO] Oracle has been installed successfully and ready to be configured.
To configure Oracle Database XE, optionally modify the parameters in '/etc/sysconfig/oracle-xe-21c.conf' and then execute '/etc/init.d/oracle-xe-21c configure' as root.
Verifying : oracle-database-xe-21c-1.0-1.x86_64
Installed:
oracle-database-xe-21c-1.0-1.x86_64
Complete!
[root@OracleLinux-R8 ~]#
```

Una vez instalada, iniciaremos el siguiente comando en `/etc/init.d/oracle-xe-21` y pondremos `configure`, esto lo que hará es configurar la base de datos, y nos hará que metamos todas las contraseñas que sean necesarias.

```
[root@OracleLinux-R8 ~]# /etc/init.d/oracle-xe-21c configure
Specify a password to be used for database accounts. Oracle recommends that the password entered should be at least 8 characters in length, contain at least 1 uppercase character, 1 lower case character and 1 digit [0-9]. Note that the same password will be used for SYS, SYSTEM and PDBADMIN accounts:
Confirm the password:
Configuring Oracle Listener.
Listener configuration succeeded.
Configuring Oracle Database XE.
Enter SYS user password:
*****
Enter SYSTEM user password:
*****
Enter PDBADMIN User Password:
*****
Prepare for db operation
7% complete
Copying database files
29% complete
Creating and starting Oracle instance
36% complete
33% complete
37% complete
46% complete
43% complete
Completing Database Creation
47% complete
56% complete
Creating Pluggable Databases
54% complete
71% complete
Executing Post Configuration Actions
93% complete
Running Custom Scripts
100% complete
Database creation complete. For details check the logfiles at:
/opt/oracle/cfgtoollogs/dbca/XE.
Database Information:
Global Database Name:XE
System Identifier(SID):XE
Look at the log file "/opt/oracle/cfgtoollogs/dbca/XE/XE.log" for further details.
Connect to Oracle Database using one of the connect strings:
Pluggable database: OracleLinux-R8.myquest.virtualbox.org/XEPDB1
```

```
Database Information:
Global Database Name:XE
System Identifier(SID):XE
Look at the log file "/opt/oracle/cfgtoollogs/dbca/XE/XE.log" for further details.

Connect to Oracle Database using one of the connect strings:
Pluggable database: OracleLinux-R8.myquest.virtualbox.org/XEPDB1
Multitenant container database: OracleLinux-R8.myquest.virtualbox.org
Use https://localhost:5500/em to access Oracle Enterprise Manager for Oracle Database XE
[root@OracleLinux-R8 ~]#
```

Y con esto, ya tendríamos la base de datos instalada!.

# Variables de entorno:

Para poder entrar a la base de datos, tenemos que crear variables de entorno para que luego a la hora de conectarnos a la base de datos no nos de problemas, para ello meteremos los siguientes comandos en la terminal:

```
echo "export ORACLE_SID=XE" >> ~/.bashrc
echo "export ORACLE_HOME=/opt/oracle/product/21c/dbhomeXE" >> ~/.bashrc
echo "export PATH=$ORACLE_HOME/bin:$PATH" >> ~/.bashrc
source ~/.bashrc
```

```
root@OracleLinux-R8:~
root@OracleLinux-R8 ~]# echo "export ORACLE_SID=XE" >> ~/.bashrc
root@OracleLinux-R8 ~]# echo "export ORACLE_HOME=/opt/oracle/product/21c/dbhomeXE" >> ~/.bashrc
root@OracleLinux-R8 ~]# echo "export PATH=$ORACLE_HOME/bin:$PATH" >> ~/.bashrc
root@OracleLinux-R8 ~]# source ~/.bashrc
root@OracleLinux-R8 ~]#
```

# Comprobaciones:

Ponemos el comando sqlplus /nolog  
Luego connect sys as sysdba;  
(Escribimos la contraseña correspondiente)  
y deberiamos de estar ya dentro de la base de datos!

```
SQL> exit
Disconnected from Oracle Database 21c Express Edition Release 21.0.0.0.0 - Production
Version 21.3.0.0.0
[root@OracleLinux-R8 ~]# sqlplus /nolog

SQL*Plus: Release 21.0.0.0.0 - Production on Sat Feb 1 15:11:41 2025
Version 21.3.0.0.0

Copyright (c) 1982, 2021, Oracle. All rights reserved.

SQL> connect sys as sysdba;
Enter password:
Connected.
SQL>
```

Tambien puedes echarle un vistazo a la documentación de github que he hecho.

<https://github.com/Xicobot/Oracle-Linux-Instalation/tree/main>