



Instituto Tecnológico Superior de Nochistlán

Ingeniería en Sistemas Computacionales
ADMINISTRACIÓN_DE_REDES_A
Miguel Ángel Pérez Pérez

"3.3 Instalación de pandora fms en Ubuntu "

Jesús Miguel Guzmán Puga
(19050113)



**TECNOLÓGICO
NACIONAL DE MÉXICO**

Nochistlán de Mejía, Zac. A 3 de mayo del 2023

INTRODUCCIÓN

En el presente reporte de prácticas se conocerán la herramienta Pandora FMS, el cual es un software de monitorización de redes informáticas. Pandora FMS permite la monitorización visual del estado y rendimiento de varios parámetros de diferentes sistemas operativos, servidores, aplicaciones y sistemas de hardware como firewalls, proxies, bases de datos, servidores web o Routers.

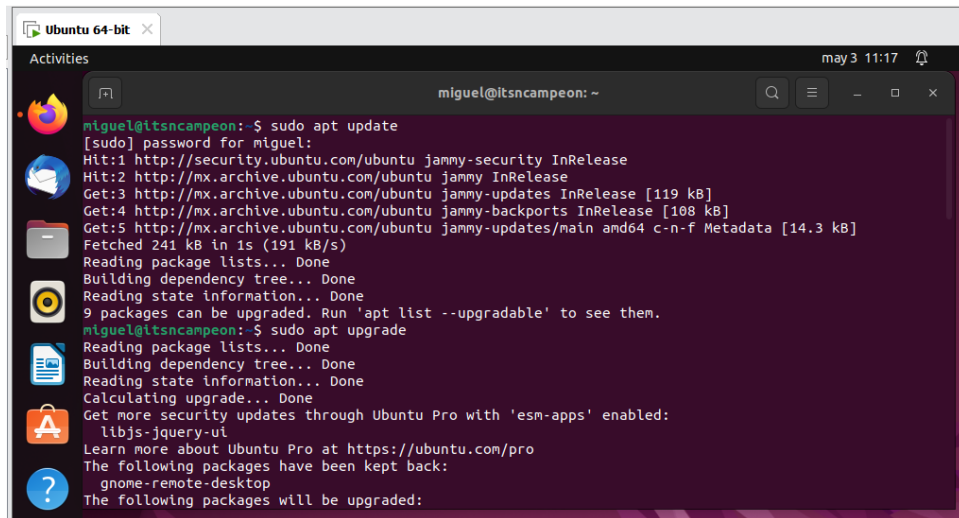


DESARROLLO

Instalación de Pandora FMS

1. Primero y como ya lo hemos hecho en prácticas anteriores, se recomienda actualizar los paquetes de su sistema a la versión actualizada. Puede actualizarlos con los siguientes comandos:

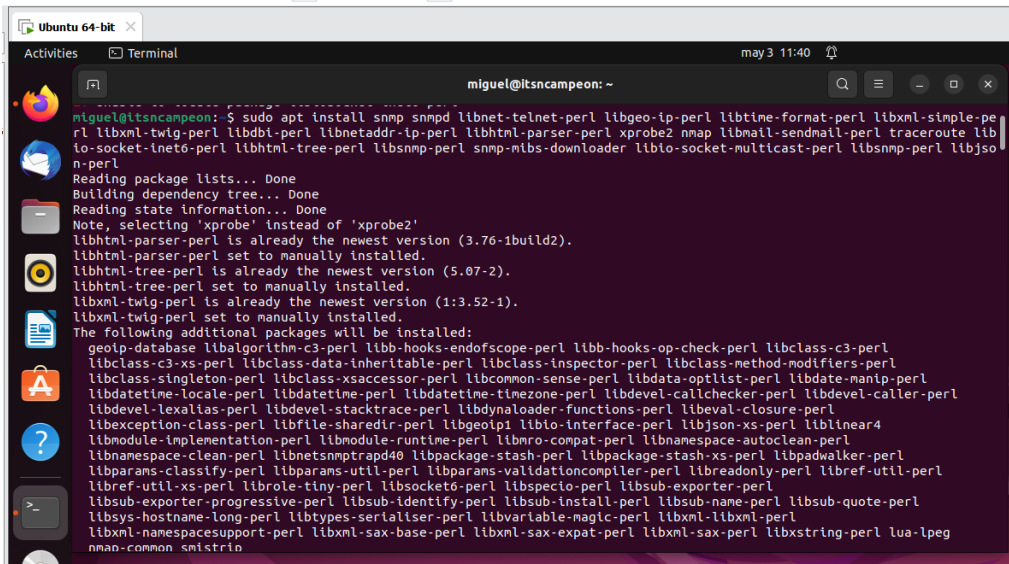
- **sudo apt update**
- **sudo apt upgrade**



```
miguel@itsncampeon: ~  
$ sudo apt update  
[sudo] password for miguel:  
Hit:1 http://security.ubuntu.com/ubuntu jammy-security InRelease  
Hit:2 http://mx.archive.ubuntu.com/ubuntu jammy InRelease  
Get:3 http://mx.archive.ubuntu.com/ubuntu jammy-updates InRelease [119 kB]  
Get:4 http://mx.archive.ubuntu.com/ubuntu jammy-backports InRelease [108 kB]  
Get:5 http://mx.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [14.3 kB]  
Fetched 241 kB in 1s (191 kB/s)  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
9 packages can be upgraded. Run 'apt list --upgradable' to see them.  
$ sudo apt upgrade  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Calculating upgrade... Done  
Get more security updates through Ubuntu Pro with 'esm-apps' enabled:  
libjs-jquery-ui  
Learn more about Ubuntu Pro at https://ubuntu.com/pro  
The following packages have been kept back:  
  gnome-remote-desktop  
The following packages will be upgraded:
```

2. Una vez que todos los paquetes estén actualizados, instale todas las dependencias requeridas para Pandora FMS con el siguiente comando algo extenso debido a que se instalan varias librerías necesarias de perl (se anexa en modo texto):

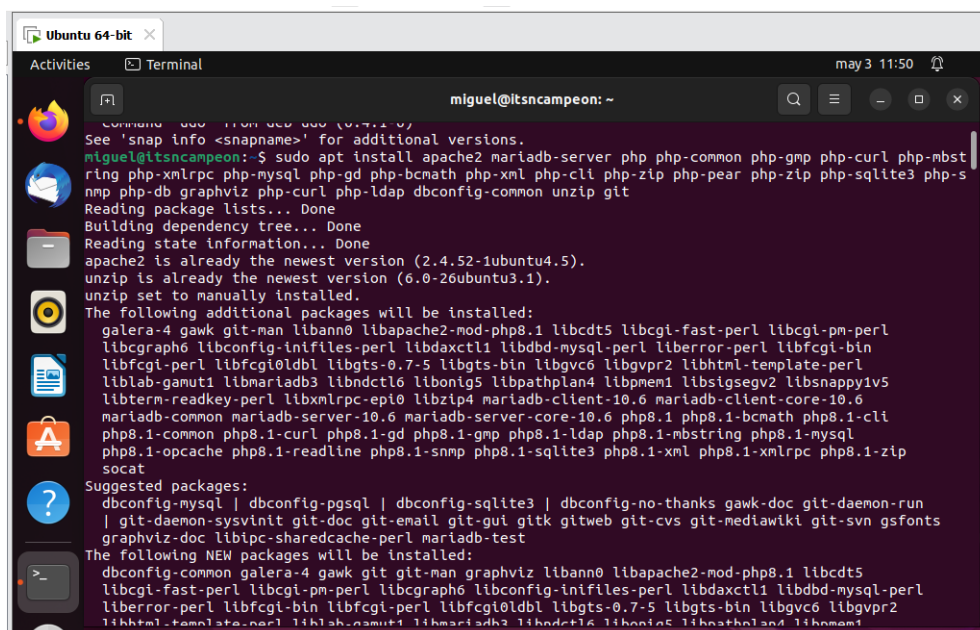
- **sudo apt install snmp snmpd libnet-telnet-perl libgeo-ip-perl libtime-formatperl libxml-simple-perl libxml-twig-perl libdbi-perl libnetaddr-ip-perllibhtml-parser-perl xprobe2 nmap libmail-sendmail-perl traceroute libiosocket-inet6-perl libhtml-tree-perl libsnmp-perl snmp-mibs-downloader libiosocket-multicast-perl libsnmp-perl libjson-perl**



```
miguel@itsncampeon: ~  
$ sudo apt install snmp snmpd libnet-telnet-perl libgeo-ip-perl libtime-format-perl libxml-simple-perl libxml-twig-perl libdbi-perl libnetaddr-ip-perl libhtml-parser-perl xprobe2 nmap libmail-sendmail-perl traceroute libio-socket-inet6-perl libhtml-tree-perl libsnmp-perl snmp-mibs-downloader libio-socket-multicast-perl libsnmp-perl libjson-perl  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
Note, selecting 'xprobe' instead of 'xprobe2'.  
libhtml-parser-perl is already the newest version (3.76-1build2).  
libhtml-parser-perl set to manually installed.  
libhtml-tree-perl is already the newest version (5.07-2).  
libhtml-tree-perl set to manually installed.  
libxml-twig-perl is already the newest version (1:3.52-1).  
libxml-twig-perl set to manually installed.  
The following additional packages will be installed:  
  geoip-database libalgorithm-c3-perl libb-hooks-endofscope-perl libb-hooks-op-check-perl libclass-c3-perl libclass-c3-xs-perl libclass-data-inheritable-perl libclass-inspector-perl libclass-method-modifiers-perl libclass-singleton-perl libclass-xsaccessor-perl libcommon-sense-perl libdata-optlist-perl libdate-manip-perl libdatetime-locale-perl libdatetime-perl libdatetime-timezone-perl libdevel-callchecker-perl libdevel-caller-perl libdevel-lexalias-perl libdevel-stacktrace-perl libdynaloader-functions-perl libeval-closure-perl libexception-class-perl libfile-sharedir-perl libgeoip1 libio-interface-perl libjson-xs-perl liblinear4 libmodule-implementation-perl libmodule-runtime-perl libmro-compat-perl libnamespace-autoclean-perl libnamespace-clean-perl libnetnmaptrpd40 libpackage-stash-perl libpackage-stash-xs-perl libpadwalker-perl libparams-classify-perl libparams-util-perl libparams-validationcompiler-perl libreadonly-perl libref-util-perl libref-util-xs-perl librole-tiny-perl libsocket6-perl libspecio-perl libsub-exporter-perl libsub-exporter-progressive-perl libsub-identify-perl libsub-install-perl libsub-name-perl libsub-quote-perl libsys-hostname-long-perl libtypes-serialiser-perl libvariable-magic-perl libxml-libxml-perl libxml-namespacesupport-perl libxml-sax-base-perl libxml-sax-expat-perl libxml-sax-perl libxstring-perl lua-lpeg nmap-common smrtio
```

3. A continuación, vamos a instalar el servidor Apache (ya lo teníamos, pero puede actualizarse), MariaDB, PHP y otras dependencias necesarias en el sistema. De igual forma podemos instalarlos todos usando el siguiente comando:

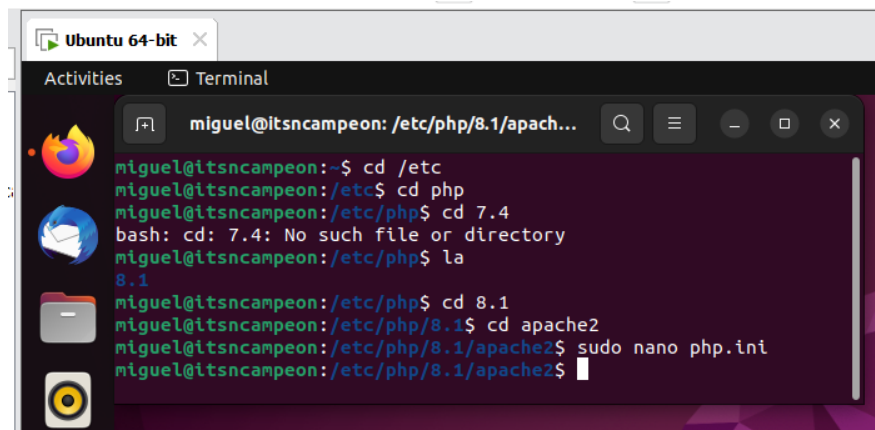
- **sudo install apache2 mariadb-server php php-common php-gmp phpcurl php-mbstring php-xmlrpc php-mysql php-gd php-bcmath php-xml php-cli php-zip php-pear php-zip php-sqlite3 php-snmp php-db graphviz php-curl php-ldap dbconfig-common unzip git**



```
miguel@itsncampeon: ~  
$ sudo apt install apache2 mariadb-server php php-common php-gmp php-curl php-mbstring php-xmlrpc php-mysql php-gd php-bcmath php-xml php-cli php-zip php-pear php-zip php-sqlite3 php-snmp php-db graphviz php-curl php-ldap dbconfig-common unzip git  
Reading package lists... Done  
Building dependency tree... Done  
Reading state information... Done  
apache2 is already the newest version (2.4.52-1ubuntu4.5).  
unzip is already the newest version (6.0-26ubuntu3.1).  
unzip set to manually installed.  
The following additional packages will be installed:  
  galera-4 gawk git-man libann0 libapache2-mod-php8.1 libcdt5 libcgi-fast-perl libcgi-pm-perl libcgprph6 libconfig-inifiles-perl libdaxctl1 libdbd-mysql-perl liberror-perl libfcgi-bin libfcgi-perl libfcgi10ldbl libgts-0.7-5 libgts-bin libgvc6 libgvpr2 libhtml-template-perl liblab-gamut1 libmariadb3 libndctl6 libonig5 libpathplan4 libpmem1 libsigsegv2 libsnappy1v5 libterm-readkey-perl libxmlrpc-epi0 libzip4 mariadb-client-10.6 mariadb-client-core-10.6 mariadb-common mariadb-server-10.6 mariadb-server-core-10.6 php8.1 php8.1-bcmath php8.1-cli php8.1-common php8.1-curl php8.1-gd php8.1-gmp php8.1-ldap php8.1-mbstring php8.1-mysql php8.1-openssl php8.1-readline php8.1-snmp php8.1-sqlite3 php8.1-xml php8.1-xmlrpc php8.1-zip socat  
Suggested packages:  
  dbconfig-mysql | dbconfig-pgsql | dbconfig-sqlite3 | dbconfig-no-thanks gawk-doc git-daemon-run | git-daemon-sysvinit git-doc git-email git-gui gitk gitweb git-cvs git-mediawiki git-svn gfonts graphviz-doc libipc-sharedcache-perl mariadb-test  
The following NEW packages will be installed:  
  dbconfig-common galera-4 gawk git git-man graphviz libann0 libapache2-mod-php8.1 libcdt5 libcgi-fast-perl libcgi-pm-perl libcgprph6 libconfig-inifiles-perl libdaxctl1 libdbd-mysql-perl liberror-perl libfcgi-bin libfcgi-perl libfcgi10ldbl libgts-0.7-5 libgts-bin libgvc6 libgvpr2 libhtml-template-perl liblab-gamut1 libmariadb3 libndctl6 libonig5 libpathplan4 libpmem1 libsigsegv2 libsnappy1v5 libterm-readkey-perl libxmlrpc-epi0 libzip4 mariadb-client-10.6 mariadb-client-core-10.6 mariadb-common mariadb-server-10.6 mariadb-server-core-10.6 php8.1 php8.1-bcmath php8.1-cli php8.1-common php8.1-curl php8.1-gd php8.1-gmp php8.1-ldap php8.1-mbstring php8.1-mysql php8.1-openssl php8.1-readline php8.1-snmp php8.1-sqlite3 php8.1-xml php8.1-xmlrpc php8.1-zip socat
```

4. Ahora vamos a configurar los ficheros para configurar nuestras instalaciones que acabamos de hacer. Modificaremos el archivo php.ini que se encuentra en la siguiente ruta que se muestra en consola.

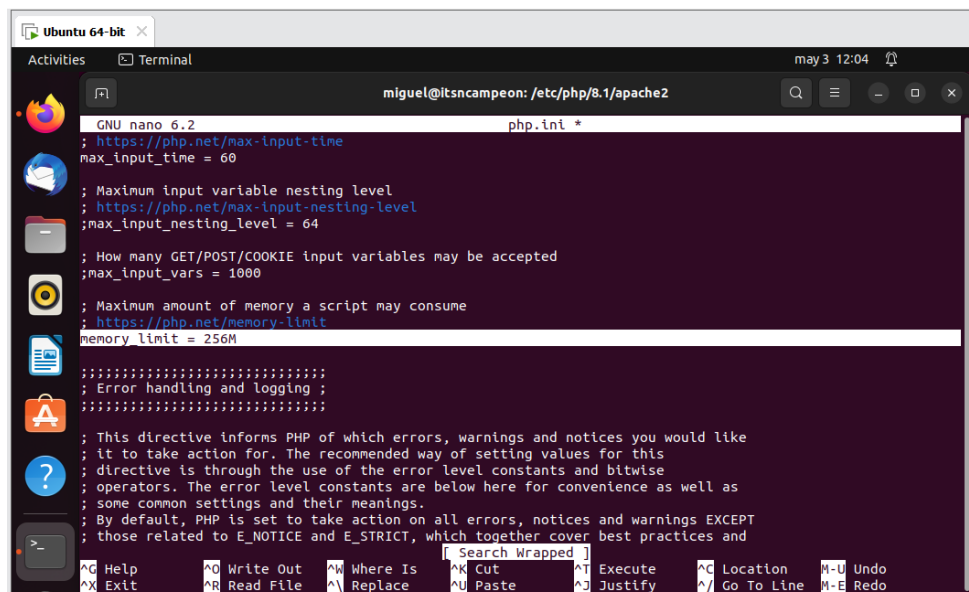
- `cd /etc`
- `cd php`
- `cd 7.4`
- `cd apache2`
- `sudo nano php.ini`



```
miguel@itsncampeon:~$ cd /etc
miguel@itsncampeon:/etc$ cd php
miguel@itsncampeon:/etc/php$ cd 7.4
bash: cd: 7.4: No such file or directory
miguel@itsncampeon:/etc/php$ ls
8.1
miguel@itsncampeon:/etc/php$ cd 8.1
miguel@itsncampeon:/etc/php/8.1$ cd apache2
miguel@itsncampeon:/etc/php/8.1/apache2$ sudo nano php.ini
miguel@itsncampeon:/etc/php/8.1/apache2$
```

5. La primera línea que buscaremos en todo el archivo es `memory_limit` (la buscamos presionando CTRL + W y escribimos la palabra o línea que queremos modificar), lo hacemos de la manera siguiente:

- **Cambiamos el valor `memory_limit = 256M`**



```
GNU nano 6.2 php.ini *
; https://php.net/max-input-time
max_input_time = 60

; Maximum input variable nesting level
; https://php.net/max-input-nesting-level
;max_input_nesting_level = 64

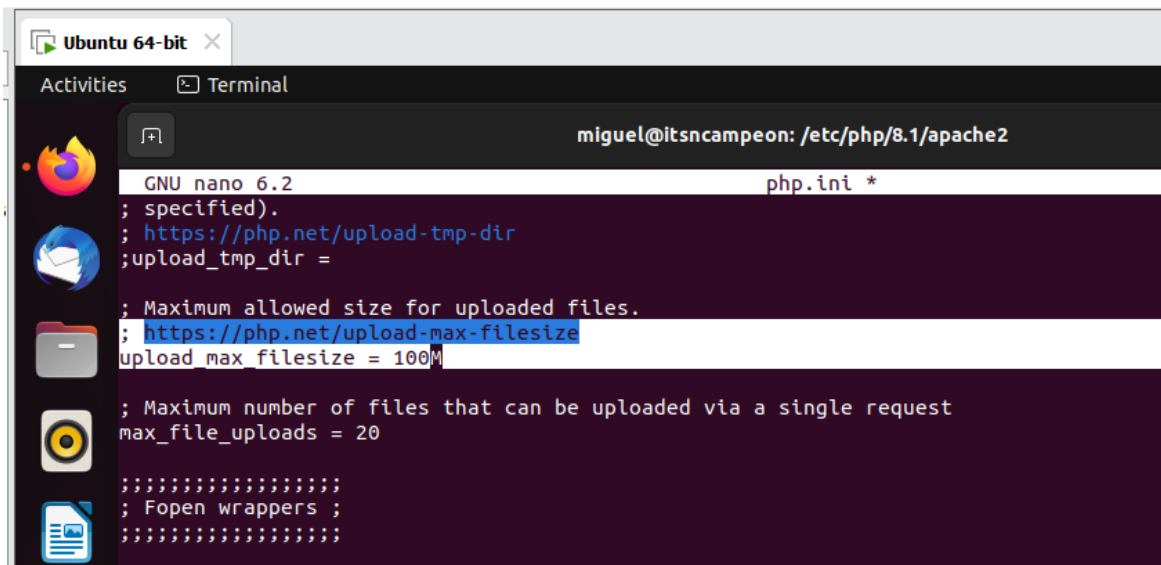
; How many GET/POST/COOKIE input variables may be accepted
;max_input_vars = 1000

; Maximum amount of memory a script may consume
; https://php.net/memory-limit
memory_limit = 256M

; Error handling and logging ;

; This directive informs PHP of which errors, warnings and notices you would like
; it to take action for. The recommended way of setting values for this
; directive is through the use of the error level constants and bitwise
; operators. The error level constants are below here for convenience as well as
; some common settings and their meanings.
; By default, PHP is set to take action on all errors, notices and warnings EXCEPT
; those related to E_NOTICE and E_STRICT, which together cover best practices and
```

6. Dentro del mismo fichero busque la línea de tamaño máximo de archivos subidos o `upload_max_filesize` y modifique su valor a 100M



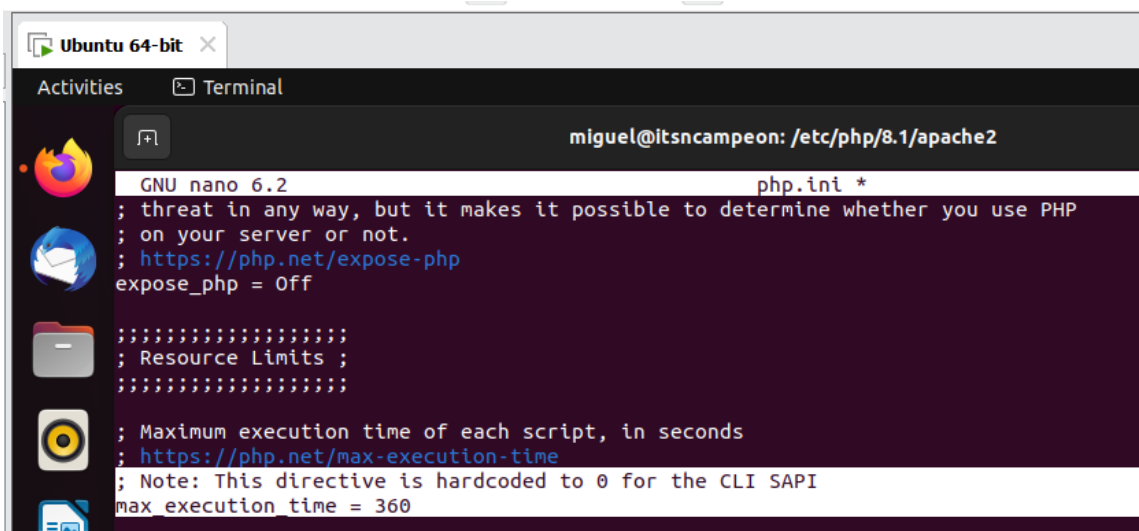
```
GNU nano 6.2 php.ini *
; specified).
; https://php.net/upload-tmp-dir
upload_tmp_dir =

; Maximum allowed size for uploaded files.
; https://php.net/upload-max-filesize
upload_max_filesize = 100M

; Maximum number of files that can be uploaded via a single request
max_file_uploads = 20

;;;;;;;;;;;;;;;;;;;;;;;;;
; Fopen wrappers ;
;;;;;;;;;;;;;;;;;;;;;;;;;
```

7. Seguimos en el mismo fichero busque la línea de tiempo máximo de ejecución o `max_execution_time` y modifique su valor a 360.

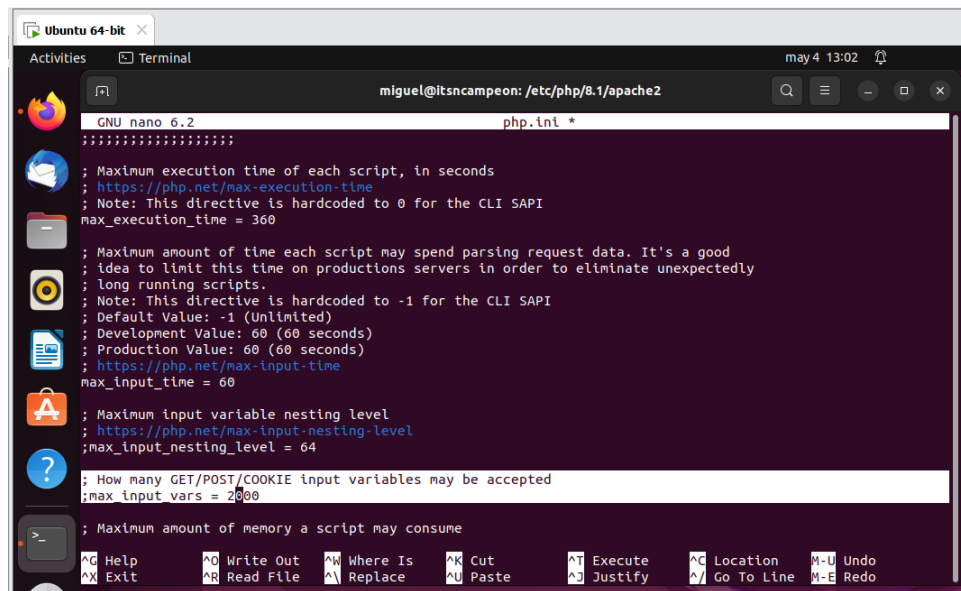


```
GNU nano 6.2 php.ini *
; threat in any way, but it makes it possible to determine whether you use PHP
; on your server or not.
; https://php.net/expose-php
expose_php = Off

;;;;;;;;;;;;;;;;;;;;;;;;;
; Resource Limits ;
;;;;;;;;;;;;;;;;;;;;;;;;;

; Maximum execution time of each script, in seconds
; https://php.net/max-execution-time
; Note: This directive is hardcoded to 0 for the CLI SAPI
max_execution_time = 360
```

8. Seguimos en el mismo fichero busque la línea de `max_input_vars` descomente la línea y modifique su valor a 200



```
GNU nano 6.2 php.ini *
; Maximum execution time of each script, in seconds
; https://php.net/max-execution-time
; Note: This directive is hardcoded to 0 for the CLI SAPI
max_execution_time = 360

; Maximum amount of time each script may spend parsing request data. It's a good
; idea to limit this time on productions servers in order to eliminate unexpectedly
; long running scripts.
; Note: This directive is hardcoded to -1 for the CLI SAPI
; Default Value: -1 (Unlimited)
; Development Value: 60 (60 seconds)
; Production Value: 60 (60 seconds)
; https://php.net/max-input-time
max_input_time = 60

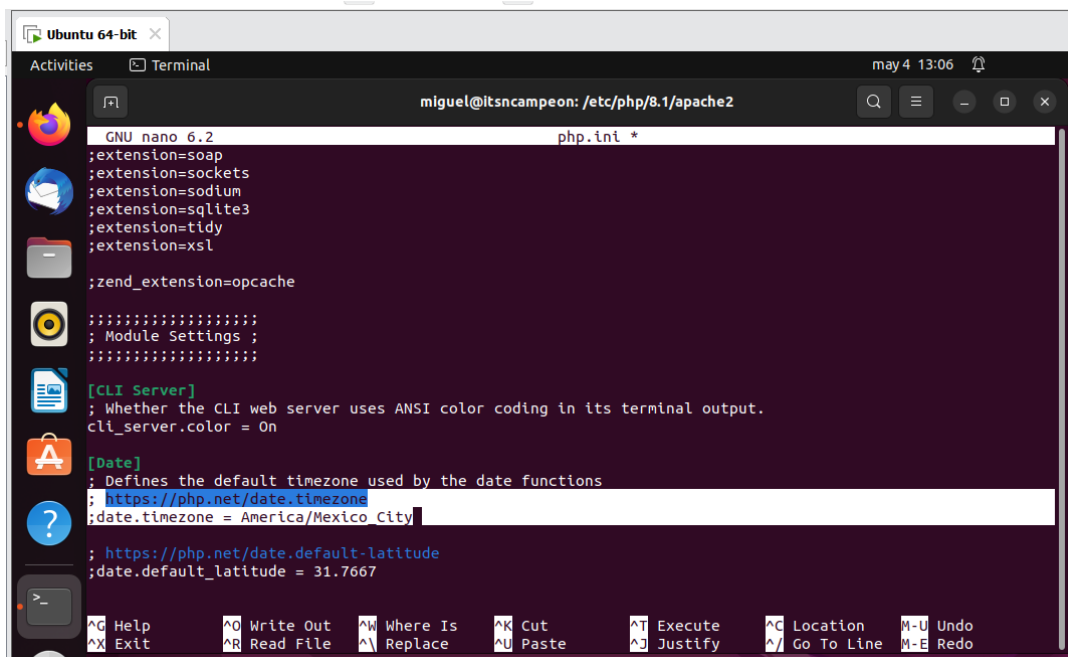
; Maximum input variable nesting level
; https://php.net/max-input-nesting-level
;max_input_nesting_level = 64

; How many GET/POST/COOKIE input variables may be accepted
max_input_vars = 200

; Maximum amount of memory a script may consume
```

9. Por ultimo en el fichero busque la línea de `date.timezone` descomente la línea y modifique su valor a `America/Mexico_City`

Por último, guardamos los cambios que hicimos en pasos anteriores guardando el documento.



```
GNU nano 6.2 php.ini *
;extension=soap
;extension=sockets
;extension=sodium
;extension=sqllite3
;extension=tidy
;extension=xsl

;zend_extension=opcache

; Module Settings

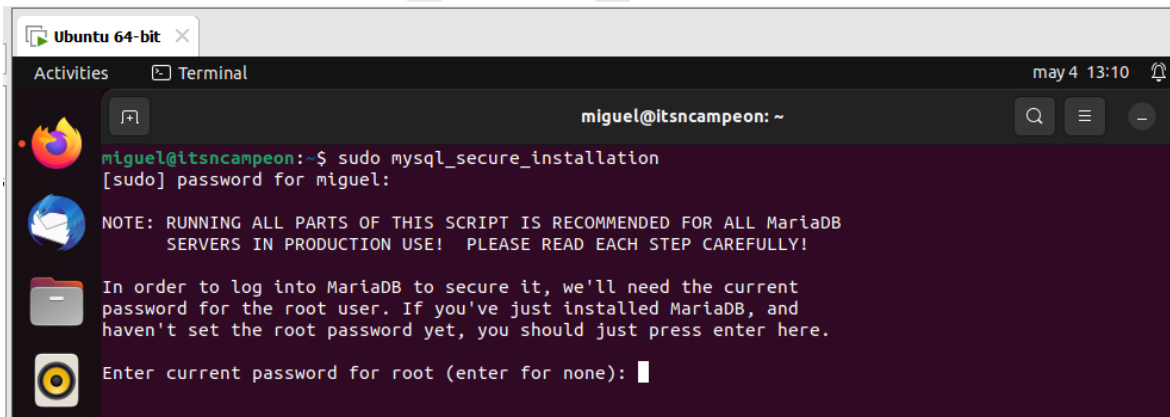
[CLI Server]
; Whether the CLI web server uses ANSI color coding in its terminal output.
cli_server.color = 0n

[Date]
; Defines the default timezone used by the date functions
; https://php.net/date.timezone
date.timezone = America/Mexico_City

; https://php.net/date.default-latitude
date.default_latitude = 31.7667
```

10. De forma predeterminada, la contraseña raíz de MariaDB no está configurada. Por lo tanto, deberá configurarlo en su sistema. Se puede hacerlo ejecutando el siguiente script:

- **Sudo mysql_secure_installation**

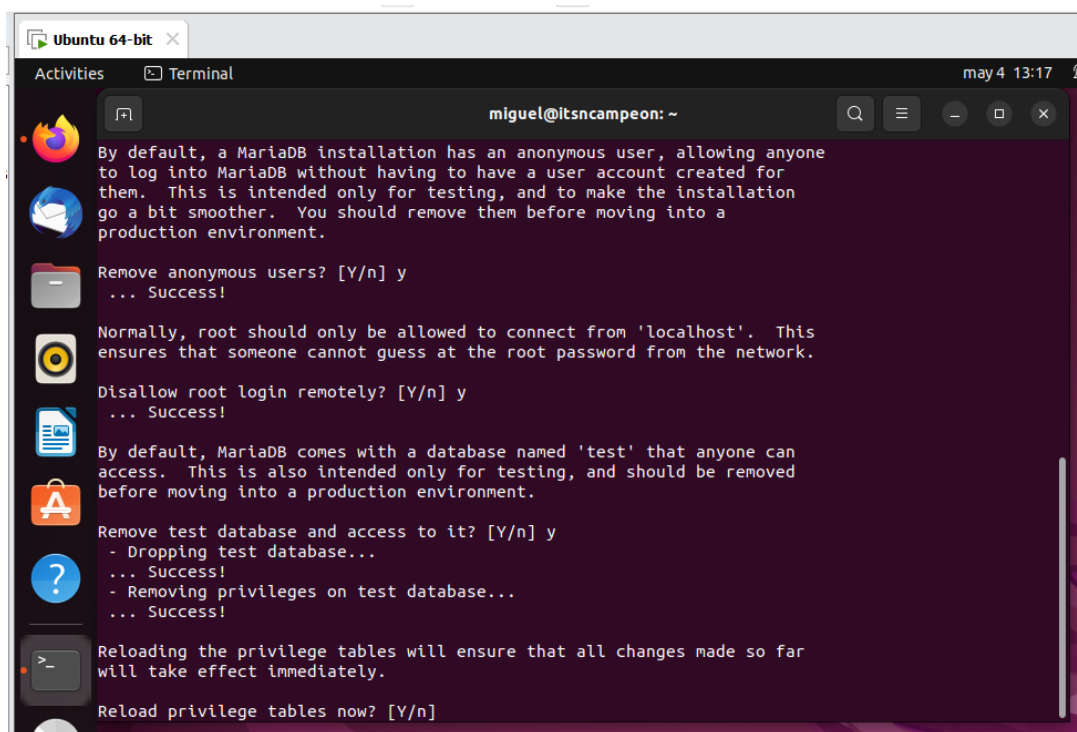


```
Ubuntu 64-bit x
Activities Terminal may 4 13:10
miguel@itsncampeon: ~
miguel@itsncampeon:~$ sudo mysql_secure_installation
[sudo] password for miguel:
NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
```

11. Escribimos el password de nuestra contraseña, no lo vamos a ver pero nos aseguramos de escribirlo bien y nos arroja una serie de preguntas, a las que hay que responder con N o Y, en su mayoría Y.



```
Ubuntu 64-bit x
Activities Terminal may 4 13:17
miguel@itsncampeon: ~
By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB 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? [Y/n] y
... Success!

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? [Y/n] y
... Success!

By default, MariaDB 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? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

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

Reload privilege tables now? [Y/n]
```



```
Reload privilege tables now? [Y/n] y
... Success!

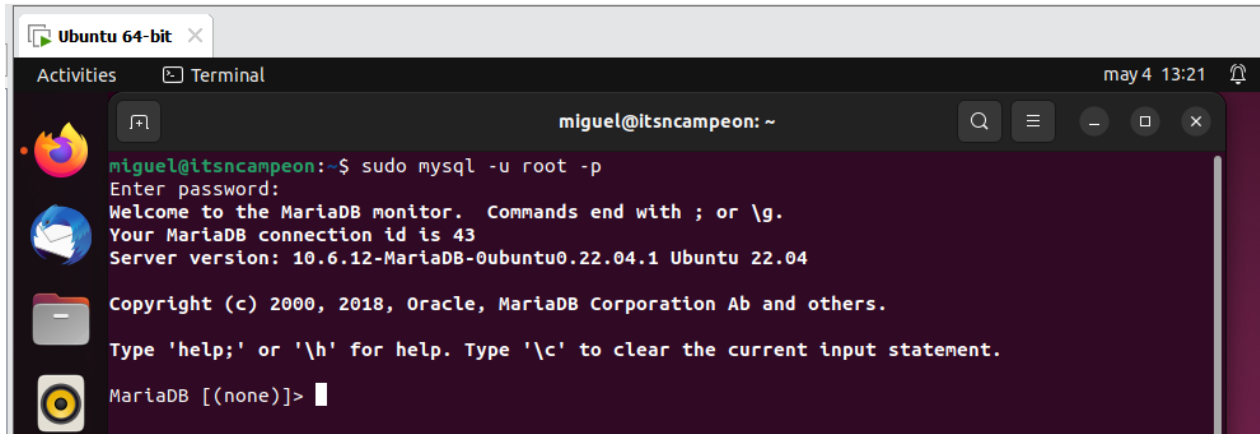
Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
miguel@itsncampeon:~$
```

12. Ahora que ya configuramos la base de datos MariaDB a continuación, vamos a iniciar sesión en el shell de MariaDB con el siguiente comando, debe introducir sus credenciales que se configuraron anteriormente:

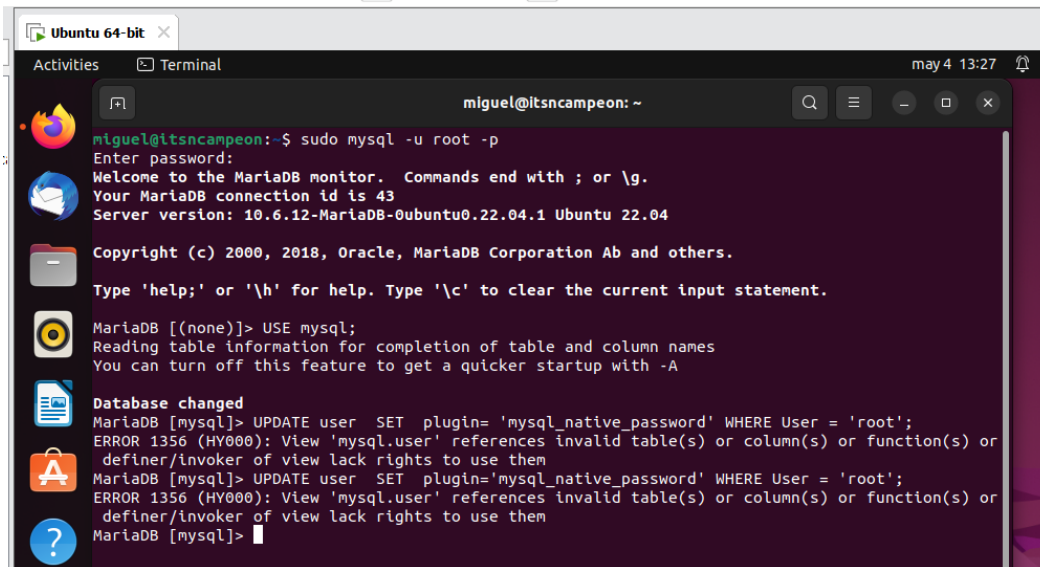
- **Sudo mysql -u root -p**



```
Ubuntu 64-bit x
Activities Terminal may 4 13:21
miguel@itsncampeon: ~
miguel@itsncampeon:~$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 43
Server version: 10.6.12-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MariaDB [(none)]>
```

13. Una vez que haya proporcionado su contraseña raíz cuando se le solicito nos queda habilitar el complemento `mysql_native_password` con el siguiente comando:

- **USE mysql;**
- **UPDATE user SET plugin= 'mysql_native_password' WHERE User = 'root';**



```
miguel@itsncampeon:~$ sudo mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 43
Server version: 10.6.12-MariaDB-0ubuntu0.22.04.1 Ubuntu 22.04

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

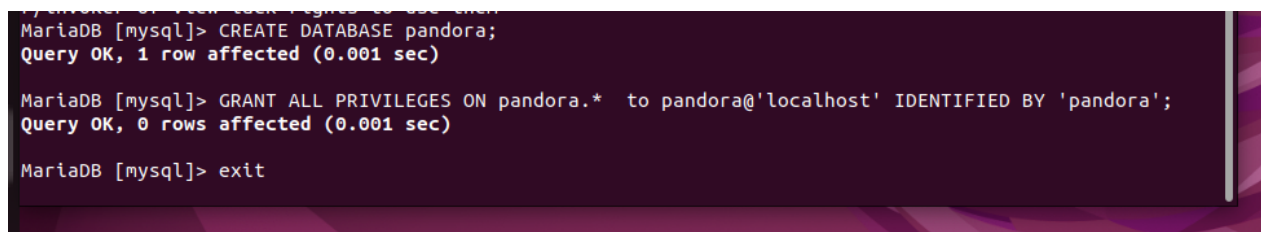
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> USE mysql;
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A

Database changed
MariaDB [mysql]> UPDATE user SET plugin='mysql_native_password' WHERE User = 'root';
ERROR 1356 (HY000): View 'mysql.user' references invalid table(s) or column(s) or function(s) or
definer/invoke of view lack rights to use them
MariaDB [mysql]> UPDATE user SET plugin='mysql_native_password' WHERE User = 'root';
ERROR 1356 (HY000): View 'mysql.user' references invalid table(s) or column(s) or function(s) or
definer/invoke of view lack rights to use them
MariaDB [mysql]>
```

14. A continuación, se debe de crear una base de datos y un usuario (en nuestro caso pandora) para poder acceder al sistema de Pandora con el siguiente comando:

- **CREATE DATABASE pandora;**
- **GRANT ALL PRIVILEGES ON pandora.* to pandora@'localhost' IDENTIFIED BY 'pandora';**
- **exti**



```
MariaDB [mysql]> CREATE DATABASE pandora;
Query OK, 1 row affected (0.001 sec)

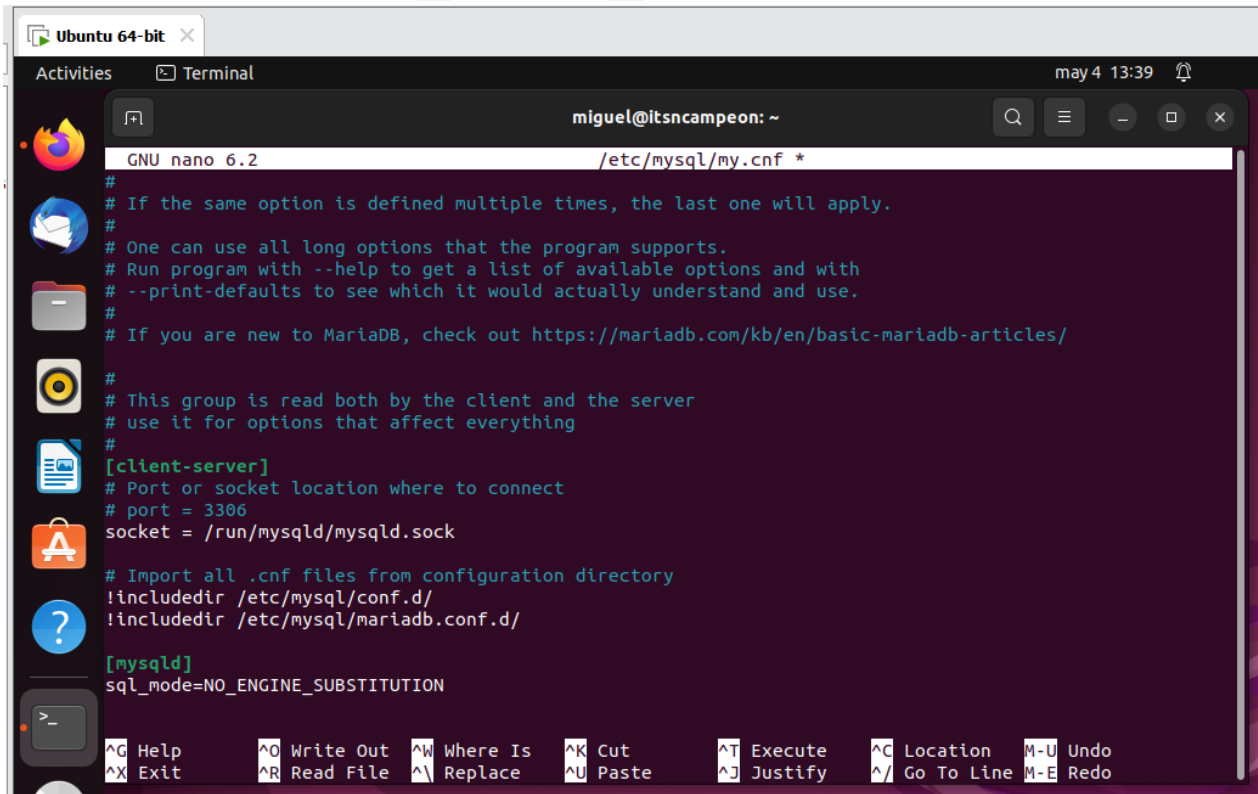
MariaDB [mysql]> GRANT ALL PRIVILEGES ON pandora.* to pandora@'localhost' IDENTIFIED BY 'pandora';
Query OK, 0 rows affected (0.001 sec)

MariaDB [mysql]> exit
```

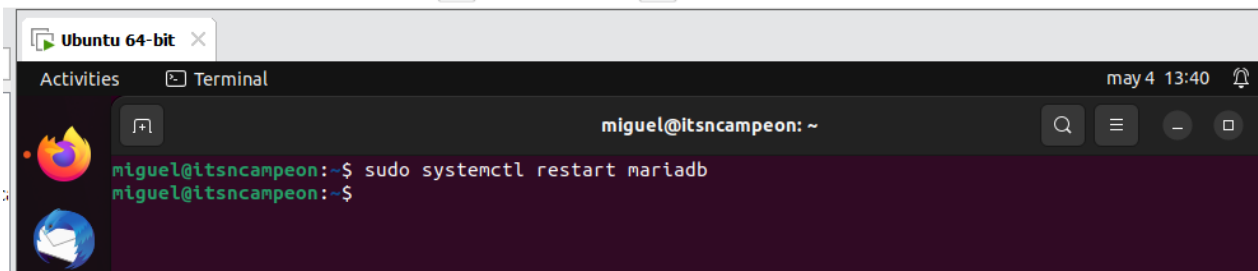
15. A continuación, debemos editar el archivo `/etc/mysql/my.cnf` y definir el `sql_mode`.

- **Sudo nano /etc/mysql/my.cnf**

Añadimos las siguientes líneas al final del archivo y guardamos los cambios. Después reiniciamos el servicio de base de datos para aplicar cambios.



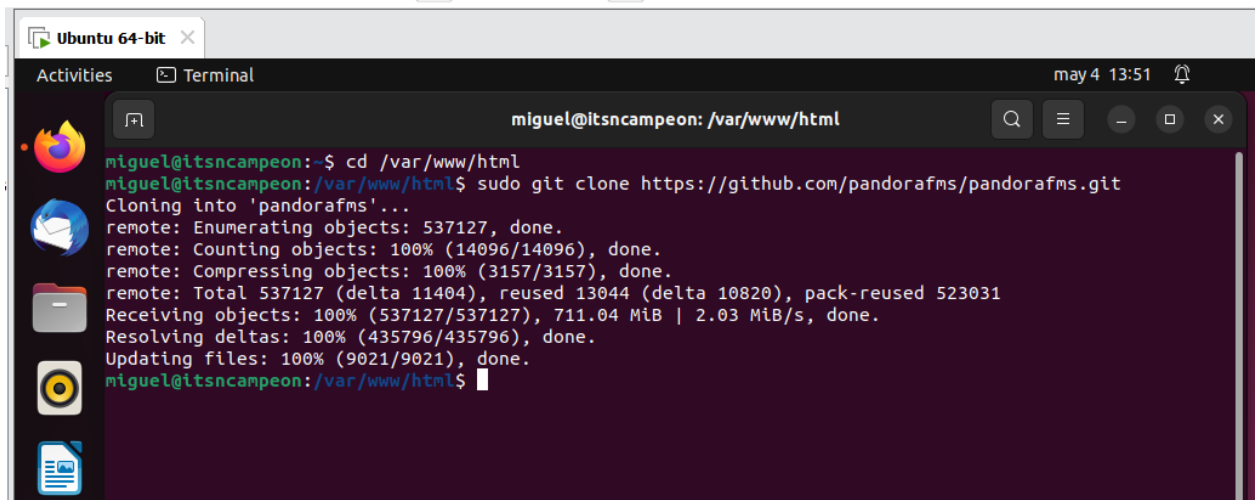
```
GNU nano 6.2 /etc/mysql/my.cnf *
#
# If the same option is defined multiple times, the last one will apply.
#
# One can use all long options that the program supports.
# Run program with --help to get a list of available options and with
# --print-defaults to see which it would actually understand and use.
#
# If you are new to MariaDB, check out https://mariadb.com/kb/en/basic-mariadb-articles/
#
# This group is read both by the client and the server
# use it for options that affect everything
#
[client-server]
# Port or socket location where to connect
# port = 3306
socket = /run/mysqld/mysqld.sock
# Import all .cnf files from configuration directory
!includedir /etc/mysql/conf.d/
!includedir /etc/mysql/mariadb.conf.d/
[mysqld]
sql_mode=NO_ENGINE_SUBSTITUTION
```



```
miguel@itsncampeon:~$ sudo systemctl restart mariadb
miguel@itsncampeon:~$
```

16. Una vez hechas todas las configuraciones anteriores a continuación, debemos descargar la última versión de pandora FMS desde el repositorio de Git. Esto podemos descargarlo con el siguiente comando accediendo primero al directorio web (apache) de ubuntu:

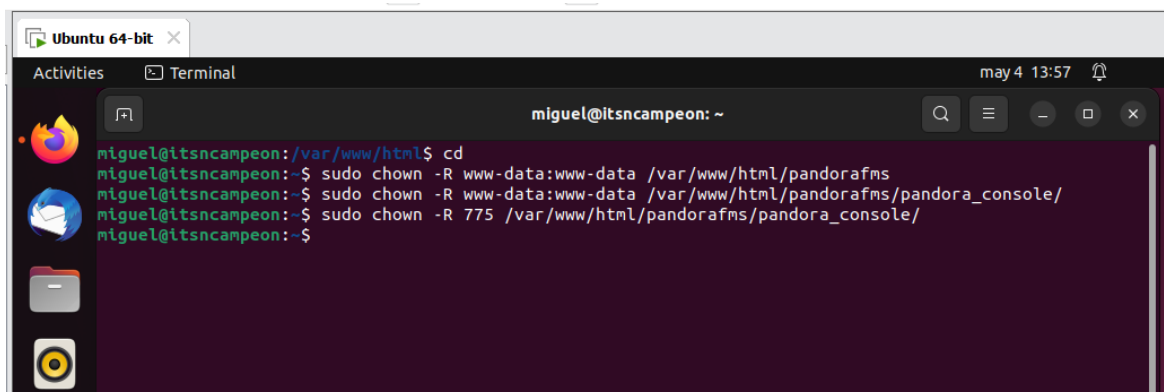
- **Cd /var/www/html**
- **Sudo git clone https://github.com/pandorafms/pandorafms.git**

A terminal window titled 'Ubuntu 64-bit' with a dark background. The prompt is 'miguel@itsncampeon: /var/www/html'. The user enters 'cd /var/www/html' and then 'sudo git clone https://github.com/pandorafms/pandorafms.git'. The output shows the cloning process: 'Cloning into 'pandorafms'...', 'remote: Enumerating objects: 537127, done.', 'remote: Counting objects: 100% (14096/14096), done.', 'remote: Compressing objects: 100% (3157/3157), done.', 'remote: Total 537127 (delta 11404), reused 13044 (delta 10820), pack-reused 523031', 'Receiving objects: 100% (537127/537127), 711.04 MiB | 2.03 MiB/s, done.', 'Resolving deltas: 100% (435796/435796), done.', 'Updating files: 100% (9021/9021), done.' The prompt returns to 'miguel@itsncampeon: /var/www/html\$'.

```
miguel@itsncampeon:~$ cd /var/www/html
miguel@itsncampeon:/var/www/html$ sudo git clone https://github.com/pandorafms/pandorafms.git
Cloning into 'pandorafms'...
remote: Enumerating objects: 537127, done.
remote: Counting objects: 100% (14096/14096), done.
remote: Compressing objects: 100% (3157/3157), done.
remote: Total 537127 (delta 11404), reused 13044 (delta 10820), pack-reused 523031
Receiving objects: 100% (537127/537127), 711.04 MiB | 2.03 MiB/s, done.
Resolving deltas: 100% (435796/435796), done.
Updating files: 100% (9021/9021), done.
miguel@itsncampeon:/var/www/html$
```

17. A continuación, otorguemos el permiso y la propiedad adecuados al directorio descargado:

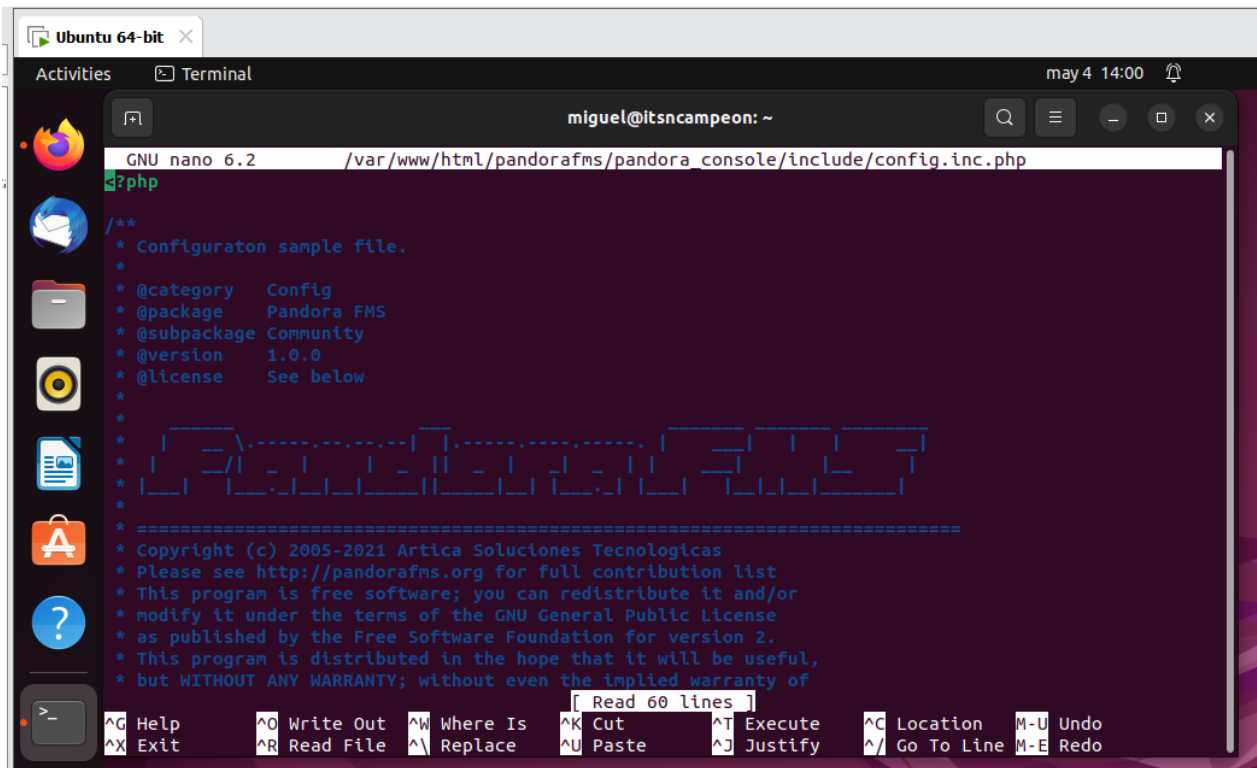
- **cd**
- **Sudo chown -R www-data:www-data /var/www/html/pandorafms**
- **Sudo chown -R www-data:www-data /var/www/html/pandorafms/pandora_console/**
- **Sudo chown -R 775 /var/www/html/pandorafms/pandora_console/**

A terminal window titled 'Ubuntu 64-bit' with a dark background. The prompt is 'miguel@itsncampeon: ~'. The user enters 'cd', then 'sudo chown -R www-data:www-data /var/www/html/pandorafms', then 'sudo chown -R www-data:www-data /var/www/html/pandorafms/pandora_console/', and finally 'sudo chown -R 775 /var/www/html/pandorafms/pandora_console/'. The prompt returns to 'miguel@itsncampeon:~\$' after each command.

```
miguel@itsncampeon:/var/www/html$ cd
miguel@itsncampeon:~$ sudo chown -R www-data:www-data /var/www/html/pandorafms
miguel@itsncampeon:~$ sudo chown -R www-data:www-data /var/www/html/pandorafms/pandora_console/
miguel@itsncampeon:~$ sudo chown -R 775 /var/www/html/pandorafms/pandora_console/
miguel@itsncampeon:~$
```

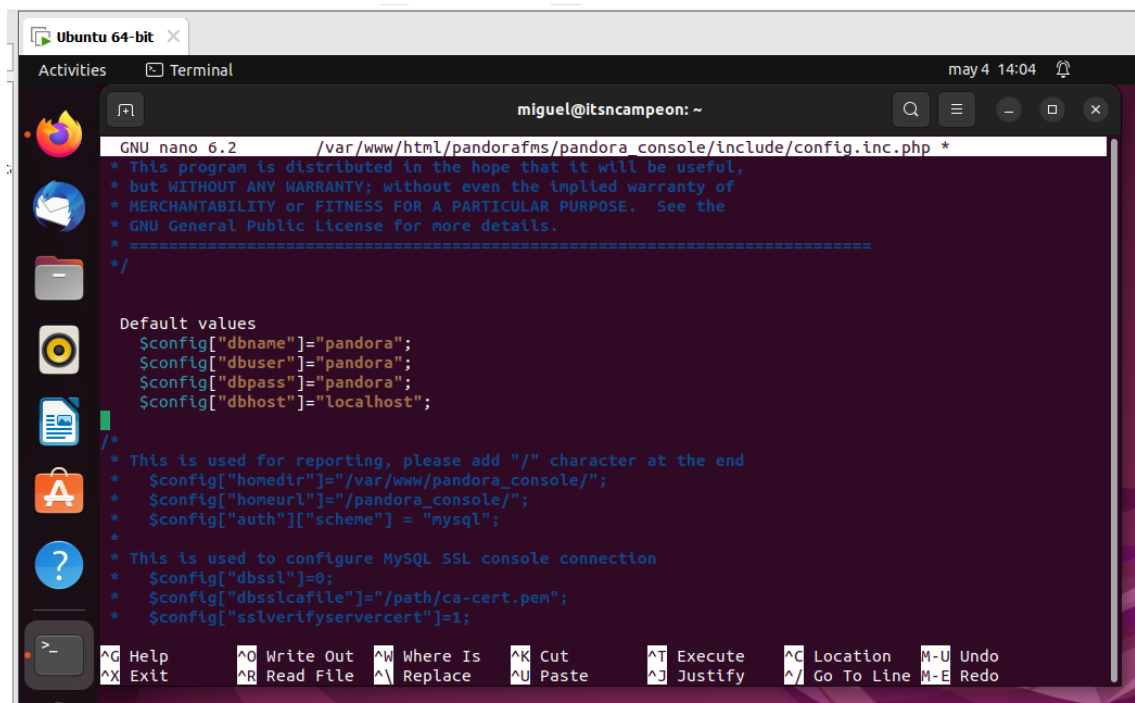
18. Luego editaremos el archivo de configuración de Pandora:

- **Sudo nano /var/www/html/pandorafms/pandora_console/include/config.inc.php**



```
GNU nano 6.2 /var/www/html/pandorafms/pandora_console/include/config.inc.php
?php
/**
 * Configuraton sample file.
 *
 * @category    Config
 * @package     Pandora FMS
 * @subpackage  Community
 * @version     1.0.0
 * @license     See below
 *
 * =====
 *
 * Copyright (c) 2005-2021 Artica Soluciones Tecnologicas
 * Please see http://pandorafms.org for full contribution list
 * This program is free software; you can redistribute it and/or
 * modify it under the terms of the GNU General Public License
 * as published by the Free Software Foundation for version 2.
 * This program is distributed in the hope that it will be useful,
 * but WITHOUT ANY WARRANTY; without even the implied warranty of
 *
 * =====
 *
 * Read 60 lines
^G Help      ^O Write Out ^W Where Is  ^K Cut       ^T Execute   ^C Location  M-U Undo
^X Exit      ^R Read File ^_ Replace   ^U Paste     ^J Justify   ^_ Go To Line M-E Redo
```

19. Ahora dentro del archivo vamos a descomentar y cambiar las siguientes líneas según la configuración de su base de datos: guardamos los cambios y cerramos



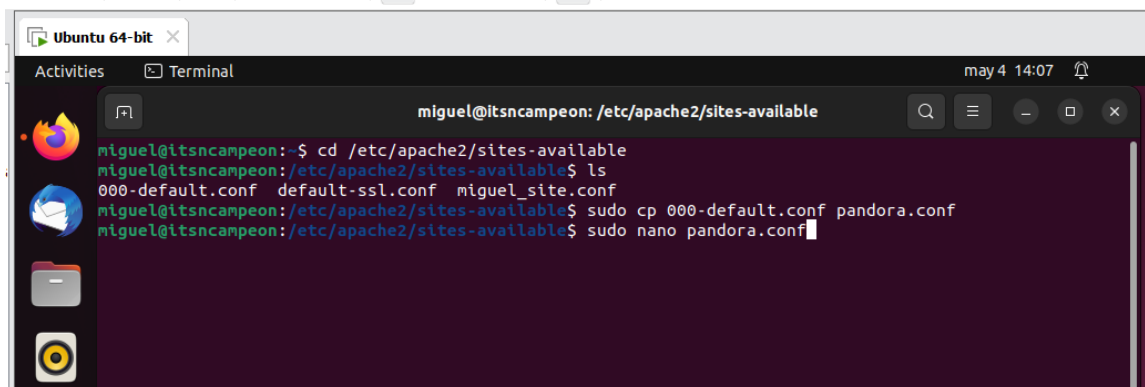
```
GNU nano 6.2 /var/www/html/pandorafms/pandora_console/include/config.inc.php *
* This program is distributed in the hope that it will be useful,
* but WITHOUT ANY WARRANTY; without even the implied warranty of
* MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the
* GNU General Public License for more details.
* =====
*/

Default values
$config["dbname"]="pandora";
$config["dbuser"]="pandora";
$config["dbpass"]="pandora";
$config["dbhost"]="localhost";

/*
 * This is used for reporting, please add "/" character at the end
 * $config["homedir"]="/var/www/pandora_console/";
 * $config["homeurl"]="/pandora_console/";
 * $config["auth"]["scheme"] = "mysql";
 *
 * This is used to configure MySQL SSL console connection
 * $config["dbssl"]=0;
 * $config["dbsslcafile"]="/path/ca-cert.pem";
 * $config["sslverifyservercert"]=1;

```

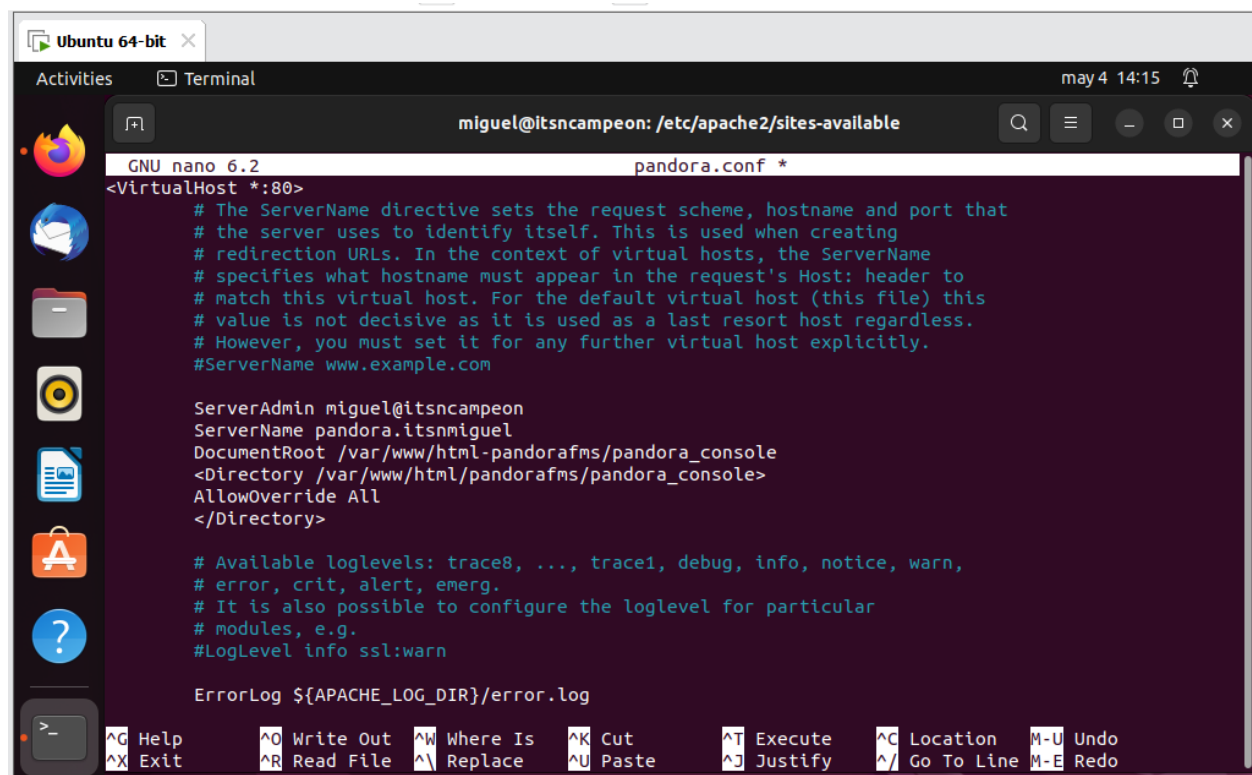
20. A continuación, deberá crear un nuevo archivo de configuración de host virtual de Apache para servir a Pandora FMS. Puedes crearlo con el siguiente comando copiando del archivo 000-default.conf a uno nuevo que se llame pandora.conf:



A terminal window titled 'Ubuntu 64-bit' showing a user named 'miguel@itsncampeon' in the directory '/etc/apache2/sites-available'. The user runs the following commands:

```
miguel@itsncampeon:~$ cd /etc/apache2/sites-available
miguel@itsncampeon:/etc/apache2/sites-available$ ls
000-default.conf  default-ssl.conf  miguel_site.conf
miguel@itsncampeon:/etc/apache2/sites-available$ sudo cp 000-default.conf pandora.conf
miguel@itsncampeon:/etc/apache2/sites-available$ sudo nano pandora.conf
```

21. Dentro de archivo pandora.conf modificamos y añadimos las siguientes líneas. Guardamos los cambios al salir del archivo de configuración.



A terminal window titled 'Ubuntu 64-bit' showing the 'pandora.conf' file being edited with 'GNU nano 6.2'. The file content is as follows:

```
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

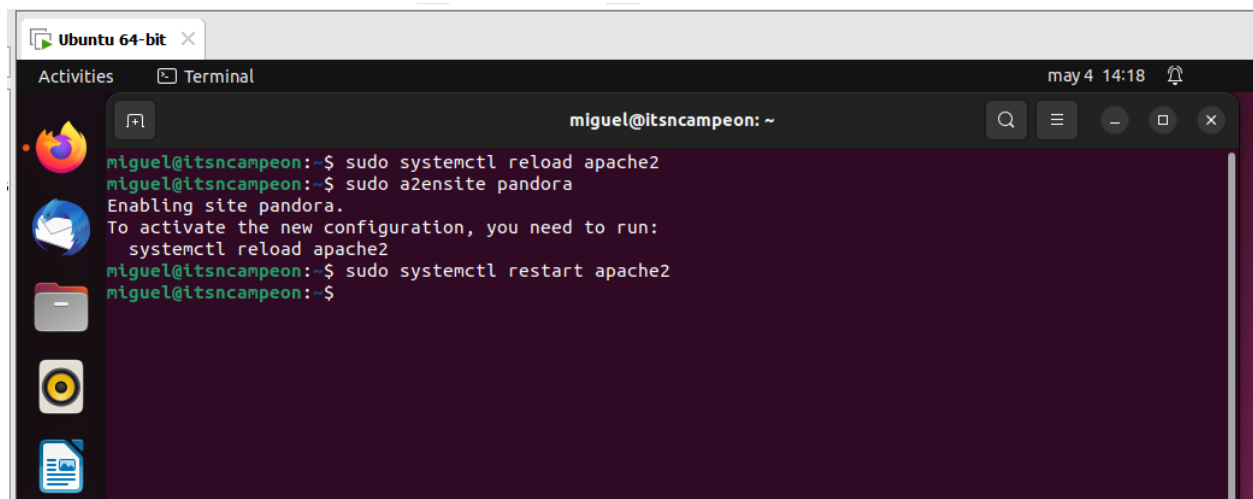
ServerAdmin miguel@itsncampeon
ServerName pandora.itsncampeon
DocumentRoot /var/www/html-pandorafms/pandora_console
<Directory /var/www/html-pandorafms/pandora_console>
AllowOverride All
</Directory>

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

ErrorLog ${APACHE_LOG_DIR}/error.log
```

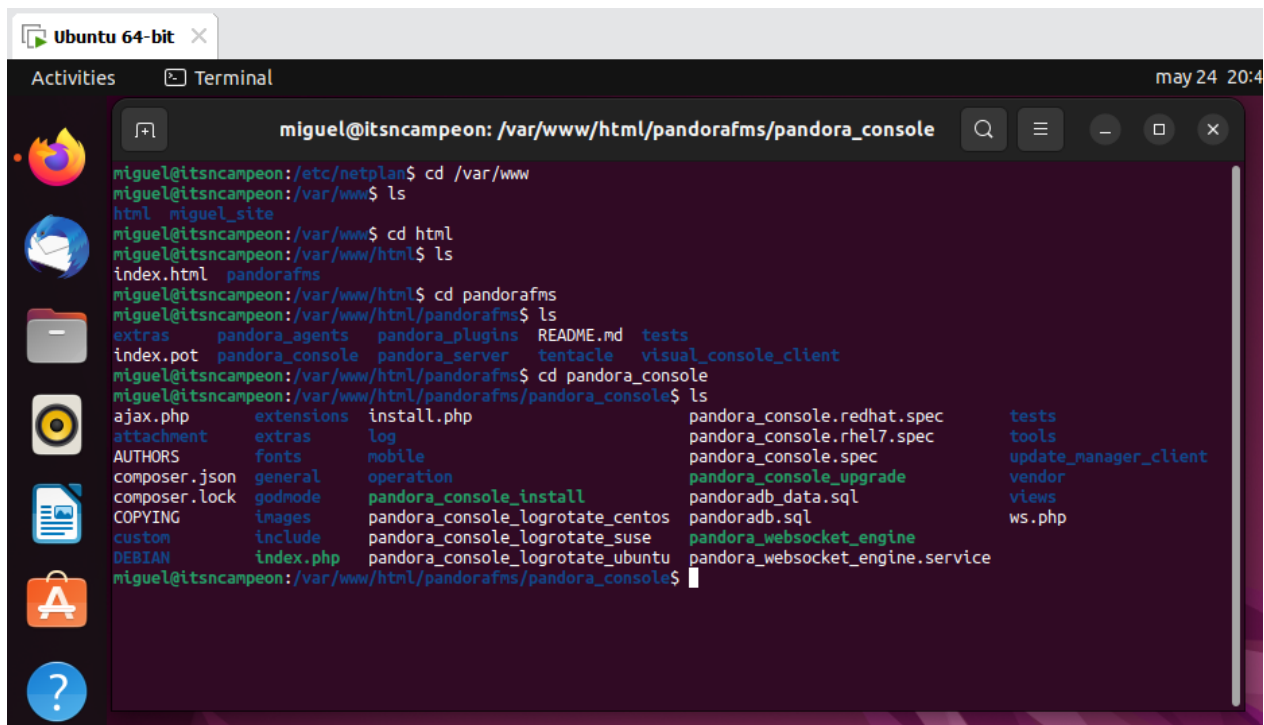
The bottom of the terminal shows the nano editor's command palette with options like Help, Write Out, Where Is, Cut, Execute, Location, Undo, Exit, Read File, Replace, Paste, Justify, Go To Line, and Redo.

22. Una vez guardado y cerrado el archivo, habilitamos el host virtual de Pandora con el siguiente comando:



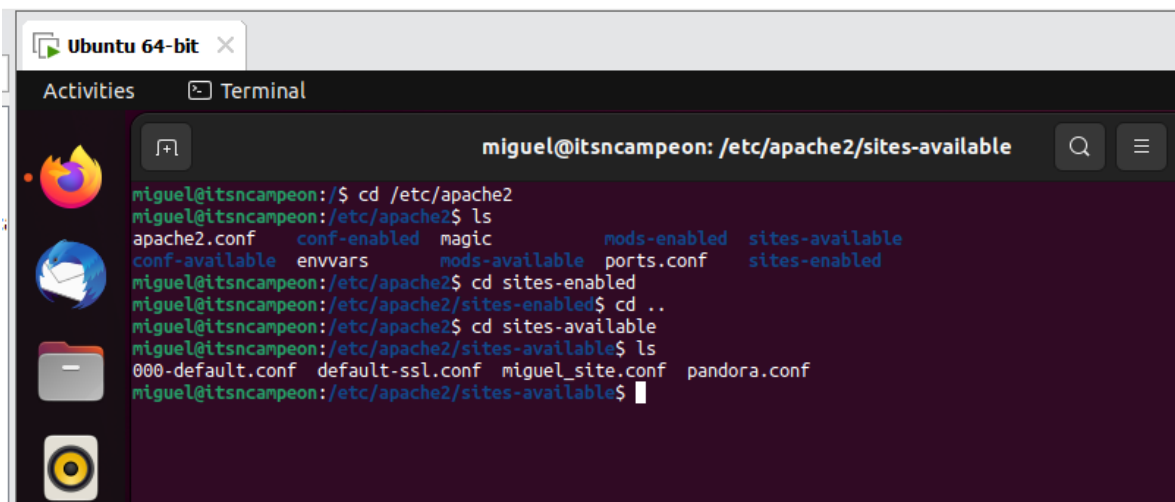
```
Ubuntu 64-bit x
Activities Terminal may 4 14:18
miguel@itsncampeon: ~
miguel@itsncampeon:~$ sudo systemctl reload apache2
miguel@itsncampeon:~$ sudo a2ensite pandora
Enabling site pandora.
To activate the new configuration, you need to run:
systemctl reload apache2
miguel@itsncampeon:~$ sudo systemctl restart apache2
miguel@itsncampeon:~$
```

23. Iniciamos nuestro apache, después de ahí ingresaremos a algunos directorios.



```
Ubuntu 64-bit x
Activities Terminal may 24 20:4
miguel@itsncampeon: /var/www/html/pandorafms/pandora_console
miguel@itsncampeon:/etc/netplan$ cd /var/www
miguel@itsncampeon:/var/www$ ls
html miguel_site
miguel@itsncampeon:/var/www$ cd html
miguel@itsncampeon:/var/www/html$ ls
index.html pandorafms
miguel@itsncampeon:/var/www/html$ cd pandorafms
miguel@itsncampeon:/var/www/html/pandorafms$ ls
extras pandora_agents pandora_plugins README.md tests
index.pot pandora_console pandora_server tentacle visual_console_client
miguel@itsncampeon:/var/www/html/pandorafms$ cd pandora_console
miguel@itsncampeon:/var/www/html/pandorafms/pandora_console$ ls
ajax.php extensions install.php pandora_console.redhat.spec tests
attachment extras log pandora_console.rhel7.spec tools
AUTHORS fonts mobile pandora_console.spec update_manager_client
composer.json general operation pandora_console_upgrade vendor
composer.lock godmode pandora_console_install pandoradb_data.sql views
COPYING images pandora_console_logrotate_centos pandoradb.sql ws.php
custom include pandora_console_logrotate_suse pandora_websocket_engine
DEBIAN index.php pandora_console_logrotate_ubuntu pandora_websocket_engine.service
miguel@itsncampeon:/var/www/html/pandorafms/pandora_console$
```

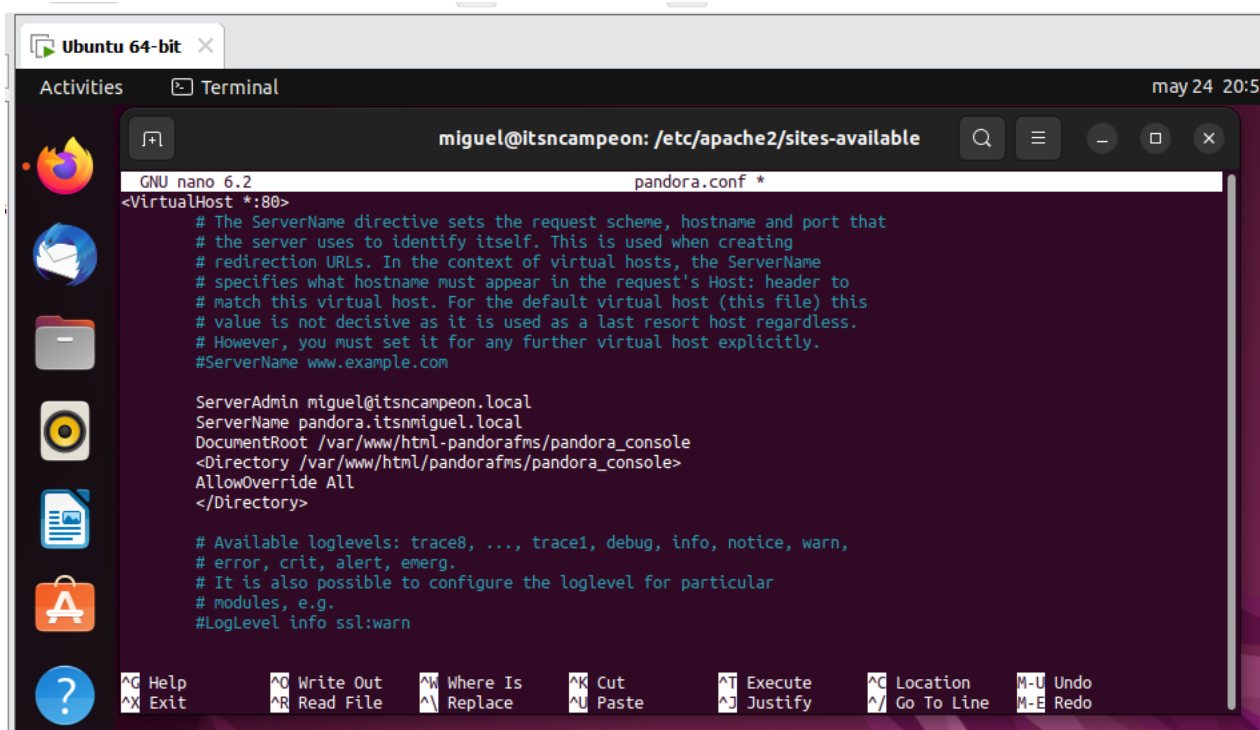
24. Lo que prosigue es ingresar al directorio apache 2



A terminal window titled 'Ubuntu 64-bit' with a search bar and a menu icon. The prompt is 'miguel@itsncampeon: /etc/apache2/sites-available'. The user enters the following commands:

```
miguel@itsncampeon:/$ cd /etc/apache2
miguel@itsncampeon:/etc/apache2$ ls
apache2.conf  conf-enabled  magic          mods-enabled  sites-available
conf-available  envvars      mods-available  ports.conf    sites-enabled
miguel@itsncampeon:/etc/apache2$ cd sites-enabled
miguel@itsncampeon:/etc/apache2/sites-enabled$ cd ..
miguel@itsncampeon:/etc/apache2$ cd sites-available
miguel@itsncampeon:/etc/apache2/sites-available$ ls
000-default.conf  default-ssl.conf  miguel_site.conf  pandora.conf
miguel@itsncampeon:/etc/apache2/sites-available$
```

25. Ya que ingresamos a la carpeta ingresaremos al chivo pandora.conf



A terminal window titled 'Ubuntu 64-bit' with a search bar, a menu icon, and window controls. The prompt is 'miguel@itsncampeon: /etc/apache2/sites-available'. The user has opened the file 'pandora.conf' using nano 6.2. The content of the file is as follows:

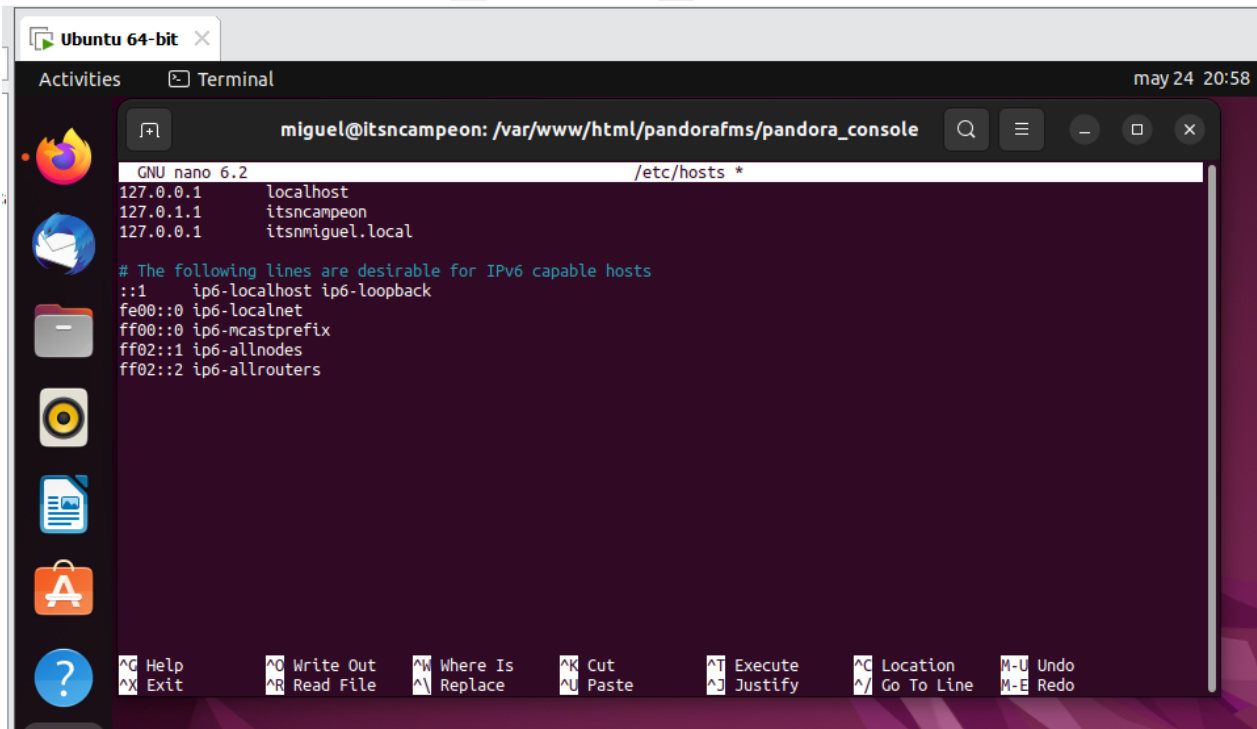
```
GNU nano 6.2 pandora.conf *
<VirtualHost *:80>
# The ServerName directive sets the request scheme, hostname and port that
# the server uses to identify itself. This is used when creating
# redirection URLs. In the context of virtual hosts, the ServerName
# specifies what hostname must appear in the request's Host: header to
# match this virtual host. For the default virtual host (this file) this
# value is not decisive as it is used as a last resort host regardless.
# However, you must set it for any further virtual host explicitly.
#ServerName www.example.com

ServerAdmin miguel@itsncampeon.local
ServerName pandora.itsnmiguel.local
DocumentRoot /var/www/html-pandorafms/pandora_console
<Directory /var/www/html-pandorafms/pandora_console>
AllowOverride All
</Directory>

# Available loglevels: trace8, ..., trace1, debug, info, notice, warn,
# error, crit, alert, emerg.
# It is also possible to configure the loglevel for particular
# modules, e.g.
#LogLevel info ssl:warn

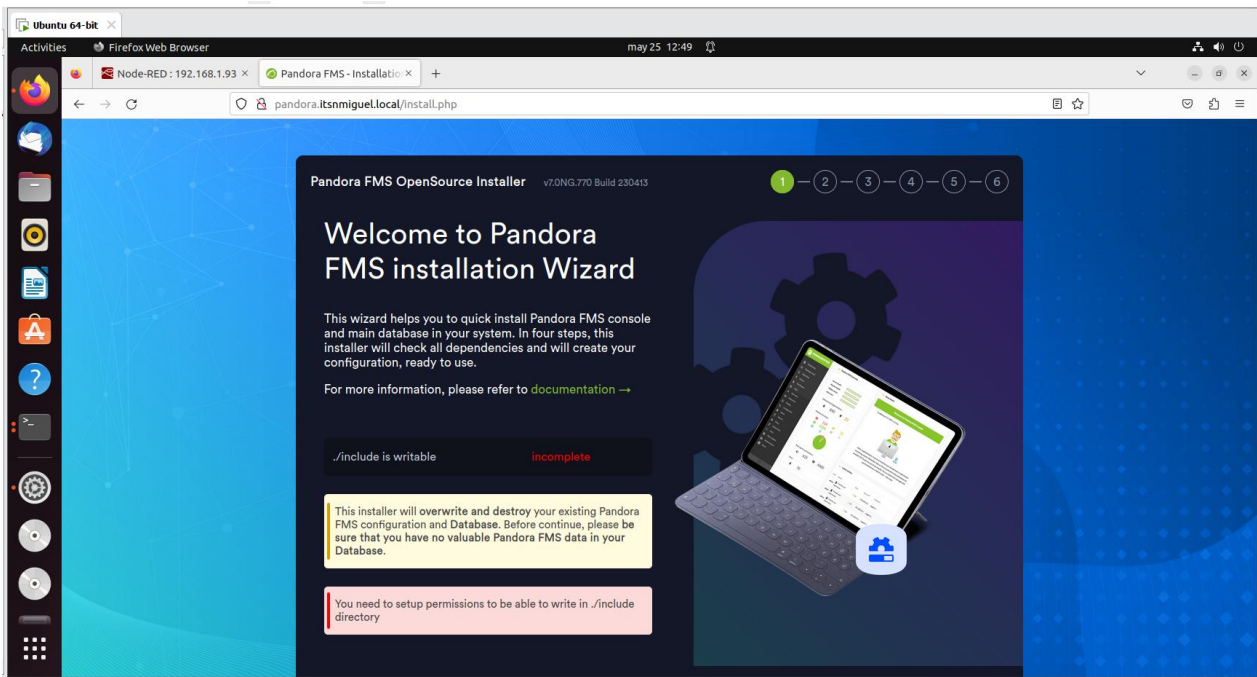
^C Help      ^O Write Out  ^W Where Is   ^K Cut        ^J Execute    ^C Location   M-U Undo
^X Exit      ^R Read File  ^\ Replace    ^U Paste      ^_ Justify    ^/ Go To Line M-E Redo
```


26. Ahora ingresaremos al host para agregar la siguiente dirección



```
GNU nano 6.2 /etc/hosts *
127.0.0.1 localhost
127.0.1.1 itsncampeon
127.0.0.1 itsnmiguel.local

# The following lines are desirable for IPv6 capable hosts
::1 ip6-localhost ip6-loopback
fe00::0 ip6-localnet
ff00::0 ip6-mcastprefix
ff02::1 ip6-allnodes
ff02::2 ip6-allrouters
```



Welcome to Pandora FMS installation Wizard

This wizard helps you to quick install Pandora FMS console and main database in your system. In four steps, this installer will check all dependencies and will create your configuration, ready to use.

For more information, please refer to [documentation](#) →

./include is writable

checked

This installer will overwrite and destroy your existing Pandora FMS configuration and Database. Before continue, please be sure that you have no valuable Pandora FMS data in your Database.



Pandora FMS is an OpenSource software project registered at [SourceForge](#) →

Start installation

Pandora FMS - Installation x +

pandora.itsnmiguel.local/install.php?step=3

Pandora FMS OpenSource Installer v7.0NG.770 Build 230413

1 — 2 — 3 — 4 — 5 — 6

Environment and database setup

This wizard will create your Pandora FMS database, and populate it with all the data needed to run for the first time.

You need a privileged user to create database schema, this is usually **root** user. Information about root user will not be used or stored anymore.

You can also deploy the scheme into an existing Database. In this case you need a privileged Database user and password of that instance.

Now, please, complete all details to configure your database and environment setup.

This installer will overwrite and destroy your existing Pandora FMS configuration and Database. Before continue, please be sure that you have no valuable Pandora FMS data in your Database.

DB Engine

MySQL(mysql)

MySQL(mysql)

DB User with privileges

root

DB Hostname

localhost

Full path to HTTP publication directory

For example /var/www/html/pandorafms/pandora_console

/var/www/html/pandorafms/pandora_console

URL path to Pandora FMS Console

For example /pandora_console

/

☐ Drop Database if exists

Installation In

A new Database

A new Database

DB Password for this user

DB Name (pandora by default)

pandora

Previous step

Pandora FMS is an OpenSource software project registered at [SourceForge](#) →

Next Step

