

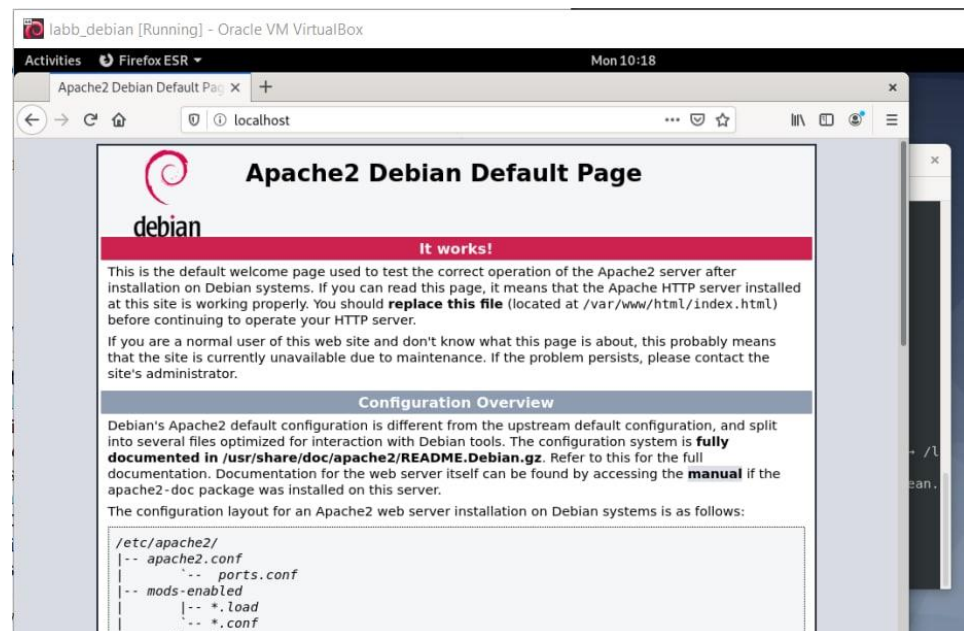
# Linux Server Administration

## Lab 13

Nykonchuk Illia 245693

### Apache installation

```
nykonchuk@illia: ~  
File Edit View Search Terminal Help  
Enabling conf serve-cgi-bin.  
Enabling site 000-default.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache2.service → /lib/systemd/system/apache2.service.  
Created symlink /etc/systemd/system/multi-user.target.wants/apache-htcacheclean.service → /lib/systemd/system/apache-htcacheclean.service.  
Processing triggers for man-db (2.8.5-2) ...  
Processing triggers for systemd (241-7-deb10u7) ...  
root@illia:~# systemctl status apache2  
● apache2.service - The Apache HTTP Server  
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor preset: active (running) since Mon 2021-06-07 10:17:42 EDT; 1min 0s ago  
   Docs: https://httpd.apache.org/docs/2.4/  
  Main PID: 2201 (apache2)  
    Tasks: 55 (limit: 2880)  
   Memory: 10.5M  
    CGroup: /system.slice/apache2.service  
            └─2201 /usr/sbin/apache2 -k start  
              └─2203 /usr/sbin/apache2 -k start  
                └─2204 /usr/sbin/apache2 -k start  
  
Jun 07 10:17:42 Illia systemd[1]: Starting The Apache HTTP Server...  
Jun 07 10:17:42 Illia systemd[1]: Started The Apache HTTP Server.  
lines 1-14/14 (END)
```



### Apache configuration

Own index.html:

```
nykonchuk@Illia: ~  
File Edit View Search Terminal Help  
nykonchuk@Illia:~$ sudo chown -R $USER:$USER /var/www/myfirstdomain.com  
[sudo] password for nykonchuk:  
nykonchuk@Illia:~$ sudo chmod 755 /var/www/myfirstdomain.com  
nykonchuk@Illia:~$ touch /var/www/myfirstdomain.com/public/index.html  
nykonchuk@Illia:~$ nano /var/www/myfirstdomain.com/public/index.html  
nykonchuk@Illia:~$ nano /var/www/myfirstdomain.com/public/index.html  
nykonchuk@Illia:~$
```

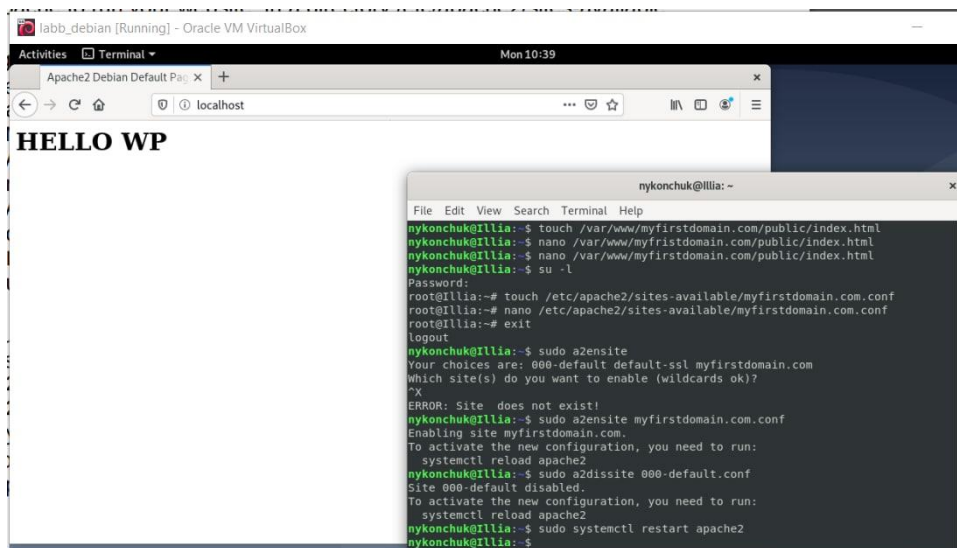
```
nykonchuk@Illia: ~  
File Edit View Search Terminal Help  
GNU nano 3.2 /var/www/myfirstdomain.com/public/index.html Modified  
  
<h1>HELLO WP</h1>  
  
[ Read 0 lines ]  
^G Get Help  ^O Write Out  ^W Where Is   ^K Cut Text   ^J Justify    ^C Cur Pos  
^X Exit      ^R Read File  ^_ Replace    ^U Uncut Text ^T To Spell   ^_ Go To Line
```

Configuration:

```
nykonchuk@Illia:~$ su -l  
Password:  
root@Illia:~# touch /etc/apache2/sites-available/myfirstdomain.com.conf  
root@Illia:~# nano /etc/apache2/sites-available/myfirstdomain.com.conf
```

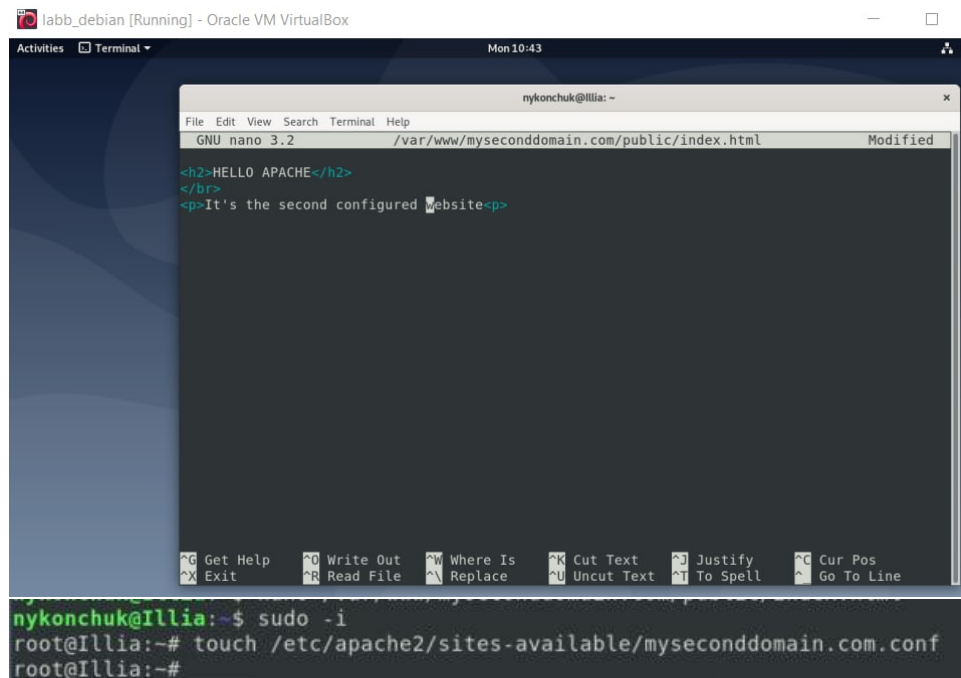
```
nykonchuk@Illia: ~  
File Edit View Search Terminal Help  
GNU nano 3.2 /etc/apache2/sites-available/myfirstdomain.com.conf Modified  
  
<VirtualHost *:80>  
ServerName myfirstdomain.com  
ServerAlias www.myfirstdomain.com  
DocumentRoot /var/www/myfirstdomain.com/public  
ServerAdmin theadmin@server.domain  
ErrorLog ${APACHE_LOG_DIR}/error.log  
CustomLog ${APACHE_LOG_DIR}/access.log combined  
</VirtualHost>
```

Status:

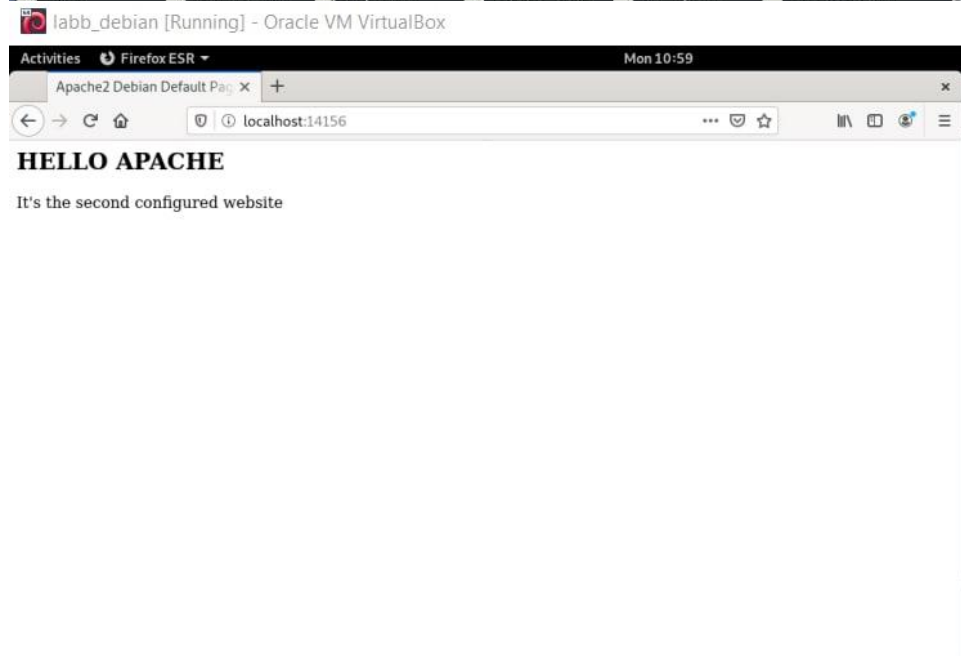


## Second server:

```
nykonchuk@illia:~$ mkdir -p /var/www/myseconddomain.com/public
mkdir: cannot create directory '/var/www/myseconddomain.com': Permission denied
nykonchuk@illia:~$ sudo mkdir -p /var/www/myseconddomain.com/public
nykonchuk@illia:~$ sudo chown -R $USER:$USER /var/www/myseconddomain.com
nykonchuk@illia:~$ sudo chmod 755 $USER:$USER /var/www/myseconddomain.com
chmod: cannot access 'nykonchuk:nykonchuk': No such file or directory
nykonchuk@illia:~$ sudo chmod 755 /var/www/myseconddomain.com
nykonchuk@illia:~$ touch /var/www/myseconddomain.com/public/index.html
nykonchuk@illia:~$
```



```
nykonchuk@illia: ~  
File Edit View Search Terminal Help  
GNU nano 3.2 /etc/apache2/sites-available/myseconddomain.com.conf Modified  
  
Listen 14156  
<VirtualHost *:80>  
ServerName myseconddomain.com  
ServerAlias www.myseconddomain.com  
DocumentRoot /var/www/myseconddomain.com/public  
ServerAdmin theadmin@server.domain  
ErrorLog ${APACHE_LOG_DIR}/error.log  
CustomLog ${APACHE_LOG_DIR}/access.log combined  
</VirtualHost>  
  
^G Get Help      ^O Write Out    ^W Where Is     ^K Cut Text     ^J Justify      ^C Cur Pos  
^X Exit          ^R Read File    ^M Replace      ^U Uncut Text   ^T To Spell     ^_ Go To Line
```



## First server redirect

```
nykonchuk@illia: ~  
File Edit View Search Terminal Help  
GNU nano 3.2 /etc/apache2/sites-available/myfirstdomain.com.conf  
  
<VirtualHost *:80>  
ServerName myfirstdomain.com  
ServerAlias www.myfirstdomain.com  
DocumentRoot /var/www/myfirstdomain.com/public  
ServerAdmin theadmin@server.domain  
ErrorLog ${APACHE_LOG_DIR}/error.log  
CustomLog ${APACHE_LOG_DIR}/access.log combined  
</VirtualHost>  
Redirect / http://example.com
```

moved to another domain. in

labb\_debian [Running] - Oracle VM VirtualBox

Activities Firefox ESR Mon 11:01

Example Domain x +

example.com

Example Domain

This domain is for use in illustrative examples in documents. You may use this domain in literature without prior coordination or asking for permission.

[More information...](#)

Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility

Filter URLs

Status	Method	Domain	File	Initiator	Type	Transferred	Size	0 ms	320 ms	640 ms
302	GET	localhost	/	document	html	891 B	1.23 KB	0 ms		
200	GET	example.com	/	document	html	cached	1.23 KB	0 ms		
404	GET	example.com	favicon.ico	FaviconLoader.jsm	html	cached	1.23 KB	0 ms		

3 requests 3.68 KB / 891 B transferred Finish: 627 ms DOMContentLoaded: 114 ms load: 155 ms

Status	Method	Domain	File	Initiator	Type	Transferred	Size	0 ms	320 ms	640 ms
301	GET	localhost	/	document	html	903 B	1.23 KB	0 ms		
200	GET	example.com	/	document	html	cached	1.23 KB	0 ms		
404	GET	example.com	favicon.ico	FaviconLoader.jsm	html	cached	1.23 KB	0 ms		

3 requests 3.68 KB / 903 B transferred Finish: 468 ms DOMContentLoaded: 90 ms load: 144 ms

Httpasswd:

```
root@Illia:/var/www/html# mkdir /usr/local/apache/
root@Illia:/var/www/html# mkdir /usr/local/apache/passwd
root@Illia:/var/www/html# htpasswd -c /usr/local/apache/passwd/passwords nykonchuk
New password:
Re-type new password:
Adding password for user nykonchuk
root@Illia:/var/www/html# exit
logout
nykonchuk@Illia:~$ sudo systemctl restart apache2
[sudo] password for nykonchuk:
nykonchuk@Illia:~$
```

```
nykonchuk@Illia: ~
File Edit View Search Terminal Help
GNU nano 3.2 /etc/apache2/sites-available/myfirstdomain.com.conf Modified

<VirtualHost *:80>
ServerName myfirstdomain.com
ServerAlias www.myfirstdomain.com
DocumentRoot /var/www/myfirstdomain.com/public
ServerAdmin theadmin@server.domain
ErrorLog ${APACHE_LOG_DIR}/error.log
CustomLog ${APACHE_LOG_DIR}/access.log combined
<Directory "/var/www/myfirstdomain.com/public">
AuthType Basic
AuthName "You cannot pas unless you have a pass"
AuthUserFile "/usr/local/apache/passwd/passwords"
Require valid-user
</Directory>
</VirtualHost>
```

Activities Firefox ESR Mon 11:12

localhost: - Szukaj w Google Preferences

localhost

Google

Authentication Required - Mozilla Firefox

http://localhost is requesting your username and password. The site says: "You cannot pas unless you have a pass"

User Name: nykonchuk

Password: .....

Cancel OK

Inspector

Search HTML

No element selected.

Flexbox

Select a Flex container or item to continue.

Grid

CSS Grid is not in use on this page

Box Model

margin

border

localhost/ Preferences

localhost

# HELLO WP

Inspector Console Debugger Network Style Editor Performance Memory Storage Accessibility

Filter URLs

Disable Cache No Throttling

Status	Method	Domain	File	Initiator	Type	Transferred	Size	Time
200	GET	www.google.co...	nav_logo323.webp	search:38 (img)	webp	4.56 KB	4.02 KB	92 ms
200	GET	www.google.co...	favicon.ico	FaviconLoader.js...	x-icon	2.06 KB	5.30 KB	29 ms
200	POST	www.google.co...	gen_204?is=web&t=af&tatyp=csi&ei=U7e-YNGJL...	search:12 (beacon)	html	451 B	0 B	49 ms
200	GET	localhost	/	document	html	301 B	18 B	25071 ms
200	GET	localhost	favicon.ico	FaviconLoader.js...	html	487 B	271 B	1 ms

15 requests 368.80 KB / 143.49 KB transferred Finish: 49.08 s DOMContentLoaded: 24.08 s load: 24.14 s



## SSL configuration:

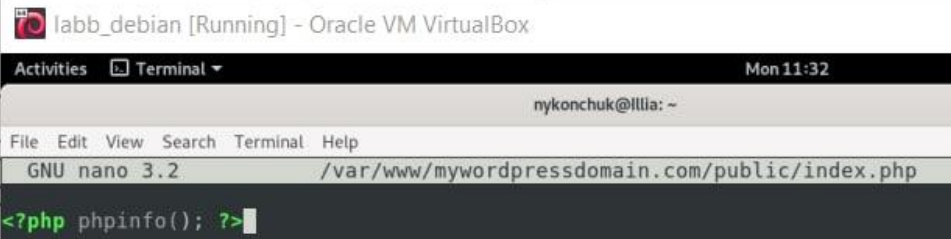
```
nykonchuk@Illia: ~  
File Edit View Search Terminal Help  
nykonchuk@Illia:~$ sudo mkdir /etc/apache2/ssl  
nykonchuk@Illia:~$ sudo openssl req -x509 -nodes -days 1095 -newkey rsa:2048 -out /etc/apache2/ssl/server.crt -keyout /etc/apache2/ssl/server.key  
Generating a RSA private key  
.....+++++  
.....+++++  
writing new private key to '/etc/apache2/ssl/server.key'  
-----  
You are about to be asked to enter information that will be incorporated  
into your certificate request.  
What you are about to enter is what is called a Distinguished Name or a DN.  
There are quite a few fields but you can leave some blank  
For some fields there will be a default value,  
If you enter '.', the field will be left blank.  
-----  
Country Name (2 letter code) [AU]:PL  
State or Province Name (full name) [Some-State]:  
Locality Name (eg, city) []:  
Organization Name (eg, company) [Internet Widgits Pty Ltd]:  
Organizational Unit Name (eg, section) []:  
Common Name (e.g. server FQDN or YOUR name) []:  
Email Address []:  
nykonchuk@Illia:~$ ls etc/apache2/ssl  
ls: cannot access 'etc/apache2/ssl': No such file or directory  
nykonchuk@Illia:~$ ls /etc/apache2/ssl  
server.crt server.key  
nykonchuk@Illia:~$  
  
nykonchuk@Illia: ~  
File Edit View Search Terminal Help  
GNU nano 3.2 /etc/apache2/sites-available/myfirstdomain.com.conf Modified  
  
<VirtualHost *:443>  
    SSLEngine on  
    SSLCertificateFile /etc/apache2/ssl/server.crt  
    SSLCertificateKeyFile /etc/apache2/ssl/server.key  
  
    ServerName myfirstdomain.com  
    ServerAlias www.myfirstdomain.com  
    DocumentRoot /var/www/myfirstdomain.com/public  
    ServerAdmin theadmin@server.domain  
    ErrorLog ${APACHE_LOG_DIR}/error.log  
    CustomLog ${APACHE_LOG_DIR}/access.log combined  
  
<Directory "/var/www/myfirstdomain.com/public">  
    AuthType Basic  
    AuthName "You cannot pas unless you have a pass"  
    AuthUserFile "/usr/local/apache/passwd/passwords"  
    Require valid-user  
</Directory>  
</VirtualHost>  
  
Warning: Potential Security x +  
https://localhost  
HELLO WP  
Would you like Firefox to save this login for https://localhost?  
nykonchuk  
.....  
☐ Show password  
Don't Save Save
```



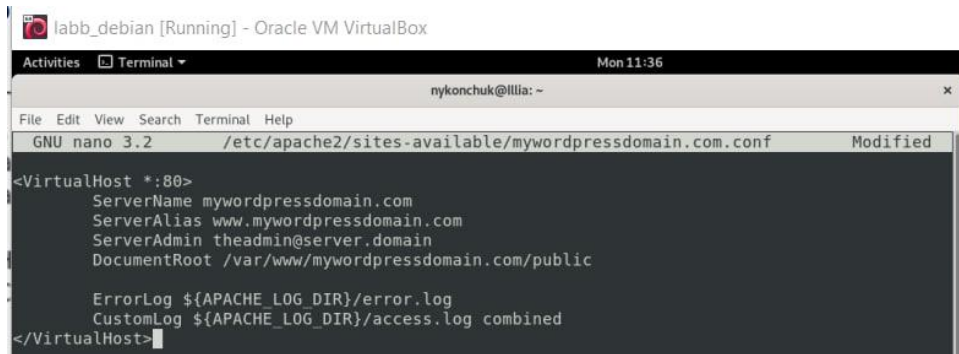
## WORDPRESS:


### Disable previous sites

```
nykonchuk@Illia:~$ ls /etc/apache2/sites-enabled/  
myfirstdomain.com.conf myseconddomain.com.conf  
nykonchuk@Illia:~$ sudo a2dissite myfirstdomain.com.conf  
Site myfirstdomain.com disabled.  
To activate the new configuration, you need to run:  
systemctl reload apache2  
nykonchuk@Illia:~$ sudo a2dissite myseconddomain.com.conf  
Site myseconddomain.com disabled.  
To activate the new configuration, you need to run:  
systemctl reload apache2  
nykonchuk@Illia:~$
```



### New config



PHP Version 7.3.27-1~deb10u1	
	
<b>System</b>	Linux illia 4.19.0-16-amd64 #1 SMP Debian 4.19.181-1 (2021-03-19) x86_64
<b>Build Date</b>	Feb 13 2021 16:31:40
<b>Server API</b>	Apache 2.0 Handler
<b>Virtual Directory Support</b>	disabled
<b>Configuration File (php.ini) Path</b>	/etc/php/7.3/apache2
<b>Loaded Configuration File</b>	/etc/php/7.3/apache2/php.ini
<b>Scan this dir for additional .ini files</b>	/etc/php/7.3/apache2/conf.d
<b>Additional .ini files parsed</b>	/etc/php/7.3/apache2/conf.d/10-mysqld.ini, /etc/php/7.3/apache2/conf.d/10-opcache.ini, /etc/php/7.3/apache2/conf.d/10-pdo.ini, /etc/php/7.3/apache2/conf.d/20-calendar.ini, /etc/php/7.3/apache2/conf.d/20-ctype.ini, /etc/php/7.3/apache2/conf.d/20-exif.ini, /etc/php/7.3/apache2/conf.d/20-fileinfo.ini, /etc/php/7.3/apache2/conf.d/20-ftp.ini, /etc/php/7.3/apache2/conf.d/20-gettext.ini, /etc/php/7.3/apache2/conf.d/20-iconv.ini, /etc/php/7.3/apache2/conf.d/20-json.ini, /etc/php/7.3/apache2/conf.d/20-mysqli.ini, /etc/php/7.3/apache2/conf.d/20-pdo_mysql.ini, /etc/php/7.3/apache2/conf.d/20-ghar.ini, /etc/php/7.3/apache2/conf.d/20-posix.ini, /etc/php/7.3/apache2/conf.d/20-readline.ini, /etc/php/7.3/apache2/conf.d/20-shmop.ini, /etc/php/7.3/apache2/conf.d/20-sockets.ini, /etc/php/7.3/apache2/conf.d/20-sysvmsg.ini, /etc/php/7.3/apache2/conf.d/20-sysvsem.ini, /etc/php/7.3/apache2/conf.d/20-sysvshm.ini, /etc/php/7.3/apache2/conf.d/20-tokenizer.ini
<b>PHP API</b>	20180731
<b>PHP Extension</b>	20180731
<b>Zend Extension</b>	320180731
<b>Zend Extension Build</b>	API320180731.NTS
<b>PHP Extension Build</b>	API20180731.NTS
<b>Debug Build</b>	no

## Mysql

```

root@illia:~# mysql -u root -p
Enter password:
Welcome to the MariaDB monitor.  Commands end with ; or \g.
Your MariaDB connection id is 51
Server version: 10.3.27-MariaDB-0+deb10u1 Debian 10

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)]> CREATE USER 'nykonchuk'@'localhost' IDENTIFIED BY 'wppass';
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> CREATE DATABASE wp_database;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> GRANT ALL ON `wp_database`.* TO `nykonchuk`@`localhost`;
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]> exit
Bye

```

## Wordpress installation

```

nykonchuk@illia:~$ cd ~/Downloads/
nykonchuk@illia:~/Downloads$ wget https://wordpress.org/latest.tar.gz
--2021-06-07 11:43:40-- https://wordpress.org/latest.tar.gz
Resolving wordpress.org (wordpress.org)... 198.143.164.252
Connecting to wordpress.org (wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 15750424 (15M) [application/octet-stream]
Saving to: 'latest.tar.gz'

latest.tar.gz      100%[=====] 15.02M  1.33MB/s   in 23s

2021-06-07 11:44:05 (666 KB/s) - 'latest.tar.gz' saved [15750424/15750424]

nykonchuk@illia:~/Downloads$ tar xpf latest.tar.gz
nykonchuk@illia:~/Downloads$ cp -r wordpress/ /var/www/mywordpressdomain.com/public/
nykonchuk@illia:~/Downloads$

```

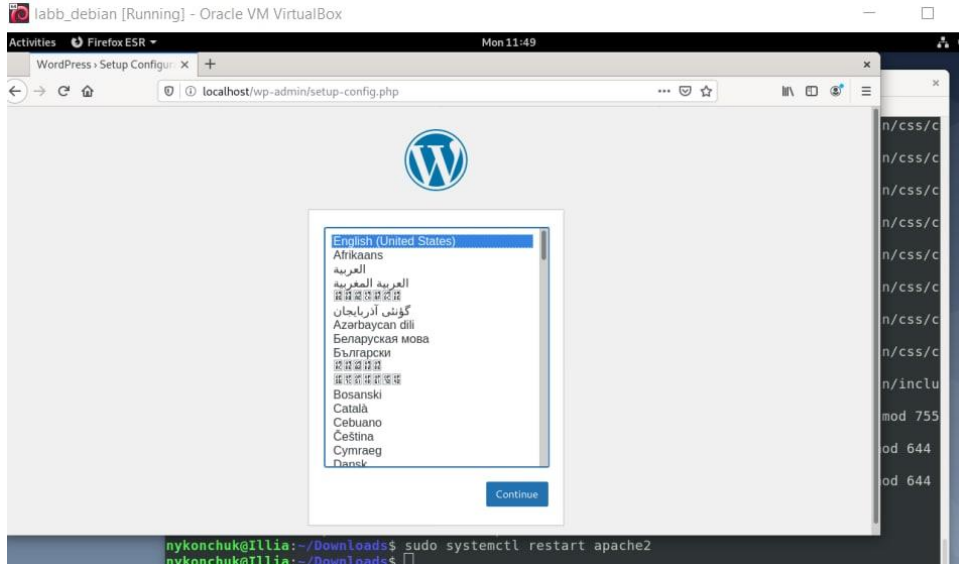
## Configuration

```
nykonchuk@llia: ~/Downloads
File Edit View Search Terminal Help
GNU nano 3.2 /etc/apache2/sites-available/mywordpressdomain.com.co

<VirtualHost *:80>
    ServerName mywordpressdomain.com
    ServerAlias www.mywordpressdomain.com
    ServerAdmin theadmin@server.domain
    DocumentRoot /var/www/mywordpressdomain.com/public/wordpress

    ErrorLog ${APACHE_LOG_DIR}/error.log
    CustomLog ${APACHE_LOG_DIR}/access.log combined
</VirtualHost>
```

Result:



Below you should enter your database connection details. If you're not sure about these, contact your host.

Database Name	<input type="text" value="wp_database"/>	The name of the database you want to use with WordPress.
Username	<input type="text" value="nykonchuk"/>	Your database username.
Password	<input type="text" value="wppass"/>	Your database password.
Database Host	<input type="text" value="localhost"/>	You should be able to get this info from your web host, if <code>localhost</code> doesn't work.
Table Prefix	<input type="text" value="wp_"/>	If you want to run multiple WordPress installations in a single database, change this.

## Information needed

Please provide the following information. Don't worry, you can always change these settings later.

Site Title

Username

Username can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password

 Hide

Very weak

**Important:** You will need this password to log in. Please store it in a secure location.

Confirm Password

☒ Confirm use of weak password

Your Email

Double-check your email address before continuing.

Search engine  
visibility

☐ Discourage search engines from indexing this site

It is up to search engines to honor this request.

IT IS UP TO SEARCH ENGINES TO HONOR THIS REQUEST

[abb\_debian [Running]] - Oracle VM VirtualBox

Activities Firefox ESR Mon 11:51

Dashboard · MyWordPressDomain +

localhost/wp-admin/

MyWordPressDomain + New Howdy, nykonchuk

Dashboard

Home

Updates

Posts

Media

Pages

Comments

Appearance

Plugins

Users

Tools

Settings

Collapse menu

## Dashboard

Welcome to WordPress!

We've assembled some links to get you started:

**Get Started**

[Customize Your Site](#)

or, [change your theme completely](#)

**Next Steps**

- [Write your first blog post](#)
- [Add an About page](#)
- [Set up your homepage](#)
- [View your site](#)

**More Actions**

- [Manage widgets](#)
- [Manage menus](#)
- [Turn comments on or off](#)
- [Learn more about getting started](#)

**Site Health Status**

No information yet...

Site health checks will automatically run periodically to gather information about your site. You can also [visit the Site Health screen](#) to gather information about your site now.

**Quick Draft**

Title

Content

What's on your mind?