

# **Networking & System Administration Lab**

## **LAMP installation**

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## Apache Installation

### Steps

1. Update your system

Update the system using command **sudo apt update**

2. Install Apache using apt:

Install apache using the command **sudo apt install apache2**

3. Start apache

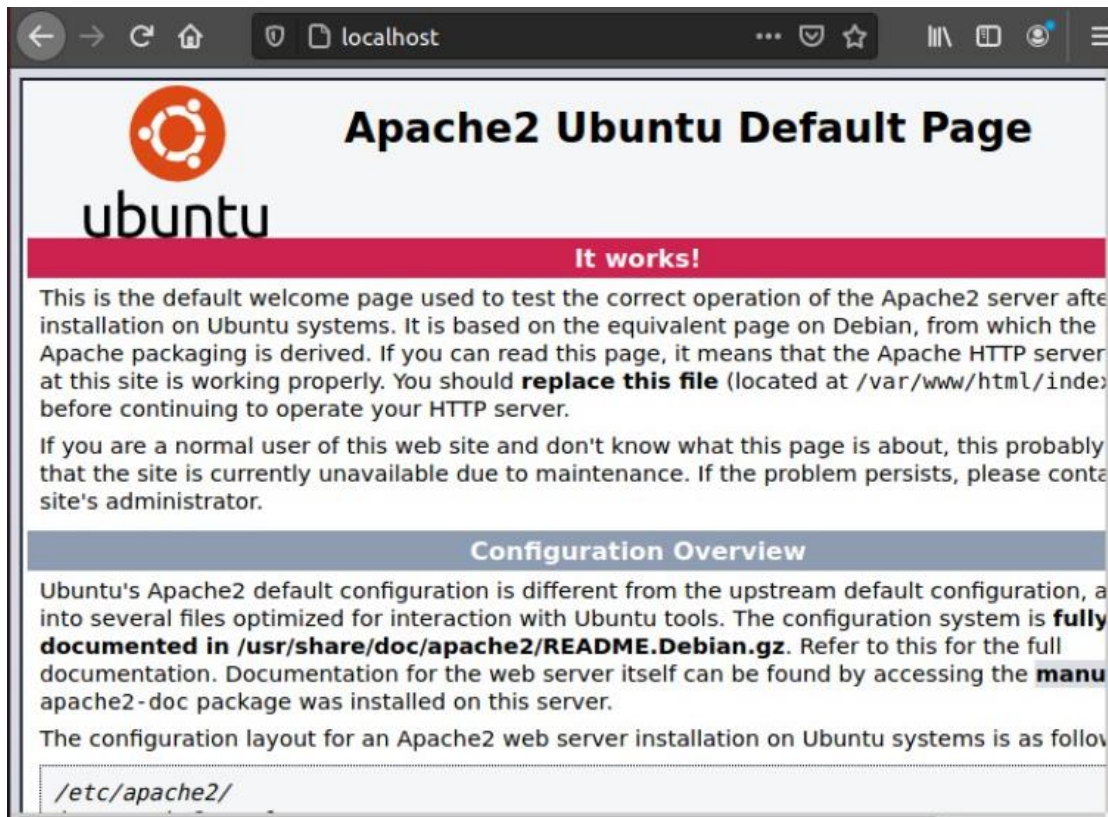
Using the command **sudo service apache2 start**

4. Confirm that Apache is now running with the following command:

Check the status of apache **sudo systemctl status apache2**

```
ashish@ubuntu:~/Desktop$ sudo systemctl status apache2
[sudo] password for ashish:
Unit apache2.service could not be found.
ashish@ubuntu:~/Desktop$ sudo systemctl status apache2
● apache2.service - The Apache HTTP Server
   Loaded: loaded (/lib/systemd/system/apache2.service; enabled; vendor prese>
   Active: active (running) since Wed 2021-09-29 05:38:37 PDT; 2min 27s ago
     Docs: https://httpd.apache.org/docs/2.4/
  Process: 856 ExecStart=/usr/sbin/apachectl start (code=exited, status=0/SUC>
    Main PID: 1078 (apache2)
      Tasks: 6 (limit: 2273)
     Memory: 18.9M
    CGroup: /system.slice/apache2.service
            └─1078 /usr/sbin/apache2 -k start
              └─1084 /usr/sbin/apache2 -k start
                └─1085 /usr/sbin/apache2 -k start
                  └─1086 /usr/sbin/apache2 -k start
                    └─1087 /usr/sbin/apache2 -k start
                      └─1088 /usr/sbin/apache2 -k start

Sep 29 05:38:28 ubuntu systemd[1]: Starting The Apache HTTP Server...
Sep 29 05:38:36 ubuntu apachectl[892]: AH00558: apache2: Could not reliably det>
Sep 29 05:38:37 ubuntu systemd[1]: Started The Apache HTTP Server.
lines 1-19/19 (END)
```



## Maria dB Installation

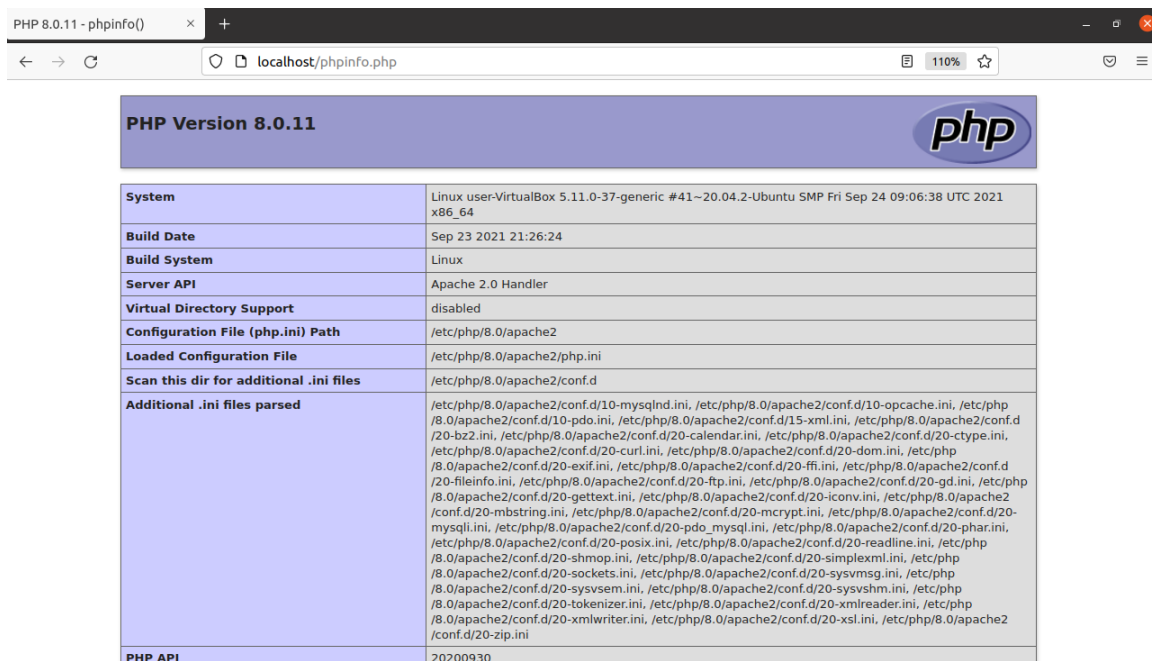
### Steps

1. Install Maria dB using the command **sudo apt install mariadb-server mariadb-client**
2. Check the status of the Maria dB using **sudo systemctl status mysql**

```
ashish@ubuntu:~/Desktop$ sudo systemctl start mysql
ashish@ubuntu:~/Desktop$ sudo systemctl status mysql
● mariadb.service - MariaDB 10.3.31 database server
   Loaded: loaded (/lib/systemd/system/mariadb.service; enabled; vendor preset: enabled)
   Active: active (running) since Wed 2021-09-29 05:38:45 PDT; 4min 19s ago
     Docs: man:mysqld(8)
           https://mariadb.com/kb/en/library/systemd/
   Process: 857 ExecStartPre=/usr/bin/install -m 755 -o mysql -g root -d /var/
   Process: 871 ExecStartPre=/bin/sh -c systemctl unset-environment _WSREP_STA
   Process: 873 ExecStartPre=/bin/sh -c [ ! -e /usr/bin/galera_recovery ] && V
   Process: 1242 ExecStartPost=/bin/sh -c systemctl unset-environment _WSREP_S
   Process: 1244 ExecStartPost=/etc/mysql/debian-start (code=exited, status=0/
   Main PID: 965 (mysqld)
     Status: "Taking your SQL requests now..."
    Tasks: 31 (limit: 2273)
```

## Installing PHP and commonly used modules

1. Install php using **sudo apt install php libapache2-mod-php php-opcache php-cli php-gd php-curl php-mysql**
2. Restart apache2 using the command **sudo systemctl restart apache2**
3. Check the php installation by using localhost/phpinfo.php



**PHP Version 8.0.11**

System	Linux user-VirtualBox 5.11.0-37-generic #41~20.04.2-Ubuntu SMP Fri Sep 24 09:06:38 UTC 2021 x86_64
Build Date	Sep 23 2021 21:26:24
Build System	Linux
Server API	Apache 2.0 Handler
Virtual Directory Support	disabled
Configuration File (php.ini) Path	/etc/php/8.0/apache2
Loaded Configuration File	/etc/php/8.0/apache2/php.ini
Scan this dir for additional .ini files	/etc/php/8.0/apache2/conf.d
Additional .ini files parsed	/etc/php/8.0/apache2/conf.d/10-mysqld.ini, /etc/php/8.0/apache2/conf.d/10-opcache.ini, /etc/php/8.0/apache2/conf.d/10-pdo.ini, /etc/php/8.0/apache2/conf.d/15-xml.ini, /etc/php/8.0/apache2/conf.d/20-bz2.ini, /etc/php/8.0/apache2/conf.d/20-calendar.ini, /etc/php/8.0/apache2/conf.d/20-ctype.ini, /etc/php/8.0/apache2/conf.d/20-curl.ini, /etc/php/8.0/apache2/conf.d/20-dom.ini, /etc/php/8.0/apache2/conf.d/20-exif.ini, /etc/php/8.0/apache2/conf.d/20-ffi.ini, /etc/php/8.0/apache2/conf.d/20-fileinfo.ini, /etc/php/8.0/apache2/conf.d/20-ftp.ini, /etc/php/8.0/apache2/conf.d/20-gd.ini, /etc/php/8.0/apache2/conf.d/20-gettext.ini, /etc/php/8.0/apache2/conf.d/20-iconv.ini, /etc/php/8.0/apache2/conf.d/20-mbstring.ini, /etc/php/8.0/apache2/conf.d/20-mcrypt.ini, /etc/php/8.0/apache2/conf.d/20-mysqli.ini, /etc/php/8.0/apache2/conf.d/20-pdo_mysql.ini, /etc/php/8.0/apache2/conf.d/20-phar.ini, /etc/php/8.0/apache2/conf.d/20-posix.ini, /etc/php/8.0/apache2/conf.d/20-readline.ini, /etc/php/8.0/apache2/conf.d/20-shmop.ini, /etc/php/8.0/apache2/conf.d/20-simplexml.ini, /etc/php/8.0/apache2/conf.d/20-sockets.ini, /etc/php/8.0/apache2/conf.d/20-sysmsg.ini, /etc/php/8.0/apache2/conf.d/20-sysvsem.ini, /etc/php/8.0/apache2/conf.d/20-sysvshm.ini, /etc/php/8.0/apache2/conf.d/20-tokenizer.ini, /etc/php/8.0/apache2/conf.d/20-xmlreader.ini, /etc/php/8.0/apache2/conf.d/20-xmlwriter.ini, /etc/php/8.0/apache2/conf.d/20-xsl.ini, /etc/php/8.0/apache2/conf.d/20-zip.ini
PHP API	20200930

```
ashish@ubuntu:~/Desktop$ php --version
PHP 7.4.24 (cli) (built: Sep 23 2021 21:36:11) ( NTS )
Copyright (c) The PHP Group
Zend Engine v3.4.0, Copyright (c) Zend Technologies
with Zend OPcache v7.4.24, Copyright (c), by Zend Technologies
```

## Installing phpmyadmin

1. Install phpmyadmin using **sudo apt install phpmyadmin php-mbstring php-zip php-gd php-json php-curl**
2. Restart apache2 **sudo systemctl restart apache2**
3. Check phpmyadmin by opening a browser and typing **http://localhost/phpmyadmin**

