# Setup webserver (NGINX) on Ubuntu

## Nginx + PHP + MariaDB + phpMyAdmin + SSH

# *0. Introduction*

## Goal

Set up a production-ready Ubuntu server with: **Nginx**, **PHP (PHP-FPM)**, **MariaDB**, **phpMyAdmin**, and **SSH on a custom port**.

## Assumptions

- Ubuntu Server (22.04+)
- CLI access
- User `max` with sudo rights

---

# *1. Secure SSH (Custom Port)*

## Edit SSH configuration

```
sudo nano /etc/ssh/sshd_config
```

## Required settings

```
Port 1611
PermitRootLogin no
PasswordAuthentication yes
```

## Apply changes

```
sudo ufw allow 1611/tcp
sudo systemctl restart ssh
```

## Verify

```
sudo ss -tlnp | grep ssh
```

---

# *2. Install Nginx*

## Install

```
sudo apt update
sudo apt install nginx -y
```

## Enable and start

```
sudo systemctl enable nginx
sudo systemctl start nginx
```

## Allow firewall

```
sudo ufw allow 'Nginx Full'
```

---

# *3. Install PHP (PHP-FPM)*

## Install PHP and extensions

```
sudo apt install php-fpm php-cli php-mysql php-curl php-gd php-mbstring php-xml php-zip -y
```

## Verify PHP

```
php -v
systemctl status php8.3-fpm
```

# 4. Configure Nginx + PHP

## Default site config

```
sudo nano /etc/nginx/sites-available/default
```

## Minimal PHP configuration

```
server {
    listen 80;
    server_name _;
    root /var/www/html;
    index index.php index.html;

    location / {
        try_files $uri $uri/ /index.php?$query_string;
    }

    location ~ \.php$ {
        include snippets/fastcgi-php.conf;
        fastcgi_pass unix:/run/php/php8.3-fpm.sock;
    }
}
```

## Reload

```
sudo nginx -t
sudo systemctl reload nginx
```

# 5. Install MariaDB

## Install

```
sudo apt install mariadb-server mariadb-client -y
```

## Secure

```
sudo mysql_secure_installation
```

## Create admin user

```
sudo mariadb
```

```
CREATE USER 'max'@'localhost' IDENTIFIED BY 'STRONG_PASSWORD';
GRANT ALL PRIVILEGES ON *.* TO 'max'@'localhost' WITH GRANT OPTION;
FLUSH PRIVILEGES;
EXIT;
```

---

# *6. Install phpMyAdmin*

## Install package

```
sudo apt install phpmyadmin -y
```

When prompted:

- Select no webserver
- Choose **Yes** for dbconfig-common

## Nginx configuration

```
sudo nano /etc/nginx/snippets/phpmyadmin.conf
```

```
location /phpmyadmin {
    root /usr/share/;
    index index.php;

    location ~ \.php$ {
        include snippets/fastcgi-php.conf;
        fastcgi_pass unix:/run/php/php8.3-fpm.sock;
    }
}
```

## Enable

```
sudo nano /etc/nginx/sites-available/default
```

Add:

```
include snippets/phpmyadmin.conf;
```

```
sudo nginx -t
sudo systemctl reload nginx
```

---

# 7. File Ownership & Permissions

## Recommended structure

```
/var/www/qool/test
```

## Ownership

```
sudo chown -R max:www-data /var/www/qool/test
```

## Permissions

```
find /var/www/qool/test -type d -exec chmod 750 {} \;
find /var/www/qool/test -type f -exec chmod 640 {} \;
```

---

# Final Notes

- Nginx handles HTTP, PHP-FPM executes PHP
- MariaDB uses socket authentication for root
- phpMyAdmin should be IP-restricted in production
- SSH on a custom port reduces automated attacks
- This setup is production-ready and extensible

---

Revision #1
Created 2026-02-09 20:44:50 UTC by Max
Updated 2026-02-09 21:05:04 UTC by Max