

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

Ngix 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

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