

# DVWA Setup Guide — Beginner Friendly (Kali / Ubuntu VM)

**Purpose:** Step-by-step, dummy-friendly instructions to install and configure DVWA on a fresh Kali or Ubuntu VM. Only run these commands on your lab VM.

## Quick checklist (before you start)

- You are on your Kali/Ubuntu VM with internet access. - You can open the Terminal app. - Your user can run sudo. - This guide installs Apache, MariaDB, PHP and DVWA into /var/www/html/dvwa.

**Important safety note:** This is a vulnerable application for learning. **Do not expose this VM to the internet.** Use NAT or host-only networking.

## 1) Update the system

Open Terminal and paste: `sudo apt update && sudo apt upgrade -y` This refreshes package lists and installs updates.

## 2) Install required packages

Install Apache, MariaDB, PHP and extensions plus git: `sudo apt install -y git apache2 mariadb-server php php-mysql php-gd php-xml php-mbstring php-curl php-zip` These packages let the VM serve and run DVWA.

## 3) Start & enable services

Start Apache and MariaDB now and enable them on boot: `sudo systemctl enable --now apache2` `sudo systemctl enable --now mariadb` Check status: `sudo systemctl status apache2 --no-pager`

## 4) Secure MariaDB (interactive)

Run: `sudo mysql_secure_installation` Answer prompts (set root password, remove anonymous users, remove test DB, reload privileges).

## 5) Create DVWA DB & user

Run: `sudo mysql -u root -p` # enter root password `CREATE DATABASE dvwa; CREATE USER 'dvwauser'@'localhost' IDENTIFIED BY 'dvwapass'; GRANT ALL PRIVILEGES ON dvwa.* TO 'dvwauser'@'localhost'; FLUSH PRIVILEGES; EXIT;` (Change dvwapass if you like.)

## 6) Download DVWA into Apache webroot

Remove default page and clone DVWA: `sudo rm -rf /var/www/html/index.html` `sudo git clone https://github.com/digininja/DVWA.git /var/www/html/dvwa`

## 7) Set file permissions

Make web server own files: `sudo chown -R www-data:www-data /var/www/html/dvwa` `sudo chmod -R 755 /var/www/html/dvwa`

## 8) Create & edit config file

Copy sample config and edit DB credentials: `cd /var/www/html/dvwa/config` `sudo cp config.inc.php.dist config.inc.php` `sudo nano config/config.inc.php` Set: `$_DVWA['db_user'] = 'dvwauser';`  
`$_DVWA['db_password'] = 'dvwapass';` `$_DVWA['db_database'] = 'dvwa';` `$_DVWA['db_host'] = '127.0.0.1';` Save with Ctrl+O, exit Ctrl+X.

## 9) Edit php.ini if required

Find PHP version (`php -v`) then edit `php.ini` for Apache, e.g.: `sudo nano /etc/php/8.1/apache2/php.ini` Set (lab-only): `allow_url_include = On` `allow_url_fopen = On` Warning: enabling `allow_url_include` is insecure outside a controlled lab.

## 10) Enable PHP modules & restart Apache

Enable modules and restart: `sudo phpenmod mbstring gd curl xml` `sudo systemctl restart apache2`

## 11) Create DB structure (web installer)

Open in browser: `http://127.0.0.1/dvwa/setup.php` Click Create / Reset Database. Login: admin / password. Set security to LOW.

## 12) Verify DVWA works

Open `http://127.0.0.1/dvwa/` and log in with admin/password. If dashboard loads, success.

## Troubleshooting — common issues

Blank page or PHP errors: check Apache error log: `sudo tail -n 100 /var/log/apache2/error.log` 500 errors: check permissions (owner www-data). Access denied for user: re-check config credentials and test with `mysql -u dvwauser -p -D dvwa`

## Extra useful commands

```
sudo systemctl restart apache2 mariadb
sudo ss -ltnp | grep apache2
ls -la /var/www/html/dvwa php -v
```

## Security note

DVWA is intentionally vulnerable. Do not expose it to the internet. After assignment, delete the VM or revert snapshot.

If you'd like, I can also create a single shell script that automates these safe steps (you must review passwords).