

Raspberry Pi - Installation reverse-proxy



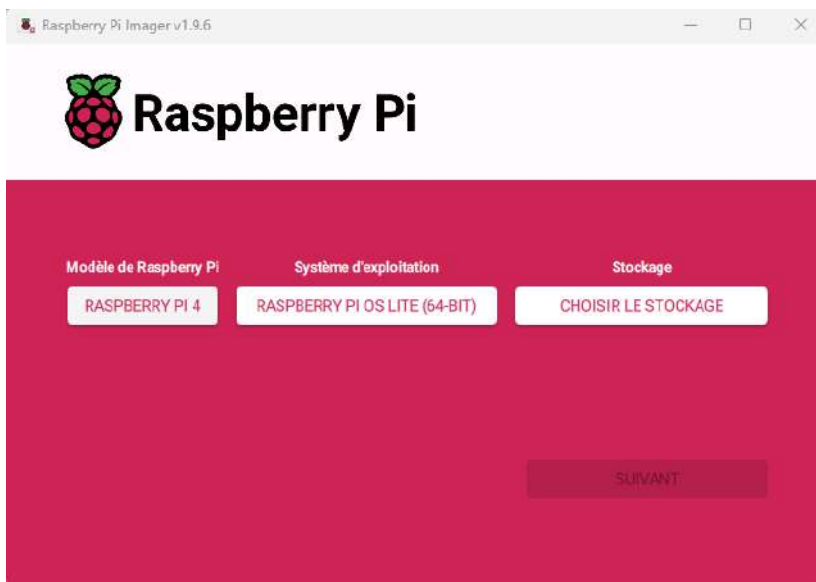
Modèle: Raspberry 4b
RAM: 4Go
Stockage: carte sd 64Go

Étape 1 : Installation Pi OS et connexion

Installer Raspberry Pi Imager : <https://www.raspberrypi.com/software>

Insérer la carte SD dans son ordinateur.

Lancer Raspberry Pi Imager et sélectionner le modèle, l'OS et la carte SD souhaité :



Appuyer sur suivant.

Puis modifier les réglages :



Configurer le Pi comme souhaité :

Personnalisation de l'OS

Général

☒ Nom d'hôte : .local

☒ Définir nom d'utilisateur et mot de passe

Nom d'utilisateur :

Mot de passe :

☒ Configurer le Wi-Fi

SSID :

Mot de passe :

☐ SSID caché

Pays Wi-Fi :

☒ Définir les réglages locaux

Fuseau horaire :

Type de clavier :

Activer SSH avec clé publique, cela permet de sécuriser davantage :

Personnalisation de l'OS

Général Services Options

☒ Activer SSH

☒ Utiliser un mot de passe pour l'authentification

☐ Authentification via clé publique

Définir authorized_keys pour 'hurbif' :

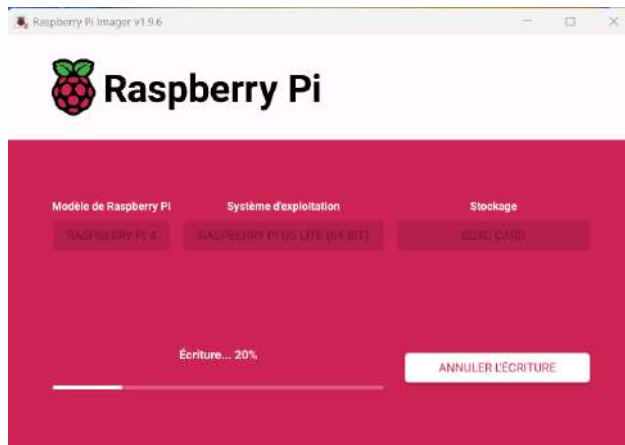
SUPPRIMER...

LANCER SSH-KEYGEN AJOUTER CLÉ SSH

ANNULER ENREGISTRER

Puis appliquer les réglages de personnalisation.

Lancer l'écriture et attendre la fin de l'installation de l'OS sur la carte SD



Mettre la carte SD dans le Raspberry pi puis le brancher sur le port Ethernet souhaité (dans mon cas c'est le port4 de ma box : j'ai activé le DHCP pour attribuer l'adresse au Raspberry Pi et mis cette adresse en statique sur ma box :



Guide Complet d'Installation de WordPress sur Raspberry Pi avec NGINX Proxy Manager et domaine personnalisé

Objectif

Installer un site WordPress localement sur un Raspberry Pi avec **Apache**, le rendre accessible sur Internet via un **reverse proxy NGINX Proxy Manager** avec un certificat SSL pour le domaine :

 <https://portfolio.rootbet.fr>

1 Préparation du Raspberry Pi

Connexion SSH

ssh

```
Linux raspberrypi 6.12.25+rpt-rpi-v8 #1 SMP PREEMPT Debian 1:6.12.25-1+rpt1 (2025-04-30) aarch64

The programs included with the Debian GNU/Linux system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*/copyright.

Debian GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Sun Jul 27 11:28:19 2025 from 192.168.1.13
hurbt@raspberrypi:~$
```

Vérification DNS

ping -4 google.com pour ping avec l'adresse IPv4

```
hurbt@raspberrypi:~$ ping -4 google.com
PING (172.217.20.206) 56(84) bytes of data.
64 bytes from par10s50-in-f14.1e100.net (172.217.20.206): icmp_seq=1 ttl=117 time=10.8 ms
64 bytes from par10s50-in-f14.1e100.net (172.217.20.206): icmp_seq=2 ttl=117 time=17.6 ms
64 bytes from par10s50-in-f14.1e100.net (172.217.20.206): icmp_seq=3 ttl=117 time=13.6 ms
```

Mise à jour du système

sudo apt update && sudo apt full-upgrade -y

sudo reboot

```
Last login: Sun Jul 27 11:28:19 2025 from 192.168.1.13
hurbt@raspberrypi:~$ sudo apt update && sudo apt full-upgrade -y
sudo reboot
```

2 Installation du serveur Apache, PHP, MariaDB

sudo apt install -y apache2 mariadb-server php php-mysql libapache2-mod-php \

php-cli php-curl php-gd php-mbstring php-xml php-xmlrpc php-soap php-intl php-zip
unzip curl

```
Last login: Sun Jul 27 11:29:25 2023 from 192.168.1.13
hurbt@raspberrypi:~$ sudo apt install -y apache2 mariadb-server php php-mysql libapache2-mod-php \
php-cli php-curl php-gd php-mbstring php-xml php-xmlrpc php-soap php-intl php-zip unzip curl
```

3 Configuration d'Apache pour écouter sur le port 8080

`sudo sed -i 's/Listen 80/Listen 8080/' /etc/apache2/ports.conf`

`sudo systemctl restart apache2`

```
hurbt@raspberrypi:~$ sudo sed -i 's/Listen 80/Listen 8080/' /etc/apache2/ports.conf
sudo systemctl restart apache2
```

4 Création du VirtualHost portfolio.conf

`sudo nano /etc/apache2/sites-available/portfolio.conf`

```
hurbt@raspberrypi:~$ sudo nano /etc/apache2/sites-available/portfolio.conf
```

Contenu du fichier :

`<VirtualHost *:8080>`

`ServerName portfolio.rootbet.fr`

`DocumentRoot /var/www/html`

`<Directory /var/www/html>`

`Options Indexes FollowSymLinks`

`AllowOverride All`

`Require all granted`

`</Directory>`

`ErrorLog ${APACHE_LOG_DIR}/portfolio_error.log`

`CustomLog ${APACHE_LOG_DIR}/portfolio_access.log combined`

`</VirtualHost>`

```
hurbt@raspberrypi: ~  
GNU nano 7.2 /etc/apache2/sites-available/portfolio.conf *  
<VirtualHost *:8080>  
    ServerName portfolio.rootbet.fr  
    DocumentRoot /var/www/html  
  
    <Directory /var/www/html>  
        Options Indexes FollowSymLinks  
        AllowOverride All  
        Require all granted  
    </Directory>  
  
    ErrorLog ${APACHE_LOG_DIR}/portfolio_error.log  
    CustomLog ${APACHE_LOG_DIR}/portfolio_access.log combined  
</VirtualHost>  
|
```

💡 Activation du site et du module rewrite :

sudo a2ensite portfolio.conf

sudo a2enmod rewrite

sudo systemctl reload apache2

```
hurbt@raspberrypi:~ $ sudo a2ensite portfolio.conf  
sudo a2enmod rewrite  
sudo systemctl reload apache2  
Enabling site portfolio.  
To activate the new configuration, you need to run:  
    systemctl reload apache2  
Enabling module rewrite.  
To activate the new configuration, you need to run:  
    systemctl restart apache2  
hurbt@raspberrypi:~ $ systemctl restart apache2  
==== AUTHENTICATING FOR org.freedesktop.systemd1.manage-units ====  
Authentication is required to restart 'apache2.service'.  
Authenticating as: ,,, (hurbt)  
Password:  
==== AUTHENTICATION COMPLETE ====  
hurbt@raspberrypi:~ $
```

5 Sécurisation de MariaDB

sudo mysql_secure_installation

```

hurbt@raspberrypi:~$ sudo systemctl reload apache2
hurbt@raspberrypi:~$ sudo mysql_secure_installation

NOTE: RUNNING ALL PARTS OF THIS SCRIPT IS RECOMMENDED FOR ALL MariaDB
SERVERS IN PRODUCTION USE! PLEASE READ EACH STEP CAREFULLY!

In order to log into MariaDB to secure it, we'll need the current
password for the root user. If you've just installed MariaDB, and
haven't set the root password yet, you should just press enter here.

Enter current password for root (enter for none):
OK, successfully used password, moving on...

Setting the root password or using the unix_socket ensures that nobody
can log into the MariaDB root user without the proper authorisation.

You already have your root account protected, so you can safely answer 'n'.

Switch to unix_socket authentication [Y/n] n
... skipping.

You already have your root account protected, so you can safely answer 'n'.

Change the root password? [Y/n] n
... skipping.

By default, a MariaDB installation has an anonymous user, allowing anyone
to log into MariaDB without having to have a user account created for

```

By default, a MariaDB installation has an anonymous user, allowing anyone to log into MariaDB without having to have a user account created for them. This is intended only for testing, and to make the installation go a bit smoother. You should remove them before moving into a production environment.

Remove anonymous users? [Y/n] n
... skipping.

Normally, root should only be allowed to connect from 'localhost'. This ensures that someone cannot guess at the root password from the network.

Disallow root login remotely? [Y/n] y
... Success!

By default, MariaDB comes with a database named 'test' that anyone can access. This is also intended only for testing, and should be removed before moving into a production environment.

Remove test database and access to it? [Y/n] y
- Dropping test database...
... Success!
- Removing privileges on test database...
... Success!

Reloading the privilege tables will ensure that all changes made so far will take effect immediately.

Reload privilege tables now? [Y/n] y

6 Création de la base de données WordPress

DB_NAME='

DB_USER='

DB_PASS='

```
hurbt@raspberrypi:~ $ DB_NAME="1"
DB_USER=" "
DB_PASS=" "
```

```
sudo mysql -u root <<EOF
```

```
CREATE DATABASE $DB_NAME DEFAULT CHARACTER SET utf8 COLLATE
utf8_unicode_ci;
```

```
CREATE USER '$DB_USER'@'localhost' IDENTIFIED BY '$DB_PASS';
```

```
GRANT ALL PRIVILEGES ON $DB_NAME.* TO '$DB_USER'@'localhost';
```

```
FLUSH PRIVILEGES;
```

```
EOF
```

```
hurbt@raspberrypi:~ $ sudo mysql -u root <<EOF
CREATE DATABASE $DB_NAME DEFAULT CHARACTER SET utf8 COLLATE utf8_unicode_ci;
CREATE USER '$DB_USER'@'localhost' IDENTIFIED BY '$DB_PASS';
GRANT ALL PRIVILEGES ON $DB_NAME.* TO '$DB_USER'@'localhost';
FLUSH PRIVILEGES;
EOF
hurbt@raspberrypi:~ $
```

❏ Installation de WordPress

```
cd /tmp
```

```
curl -O https://wordpress.org/latest.tar.gz
```

```
tar xzvf latest.tar.gz
```

```
sudo rsync -av wordpress/ /var/www/html/
```

```
sudo chown -R www-data:www-data /var/www/html
```

```
sudo find /var/www/html/ -type d -exec chmod 755 {} \;
```

```
sudo find /var/www/html/ -type f -exec chmod 644 {} \;
```

```
hurbt@raspberrypi:~ $ cd /tmp
curl -O https://wordpress.org/latest.tar.gz
tar xzvf latest.tar.gz
sudo rsync -av wordpress/ /var/www/html/
sudo chown -R www-data:www-data /var/www/html
sudo find /var/www/html/ -type d -exec chmod 755 {} \;
sudo find /var/www/html/ -type f -exec chmod 644 {} \;
% Total    % Received % Xferd  Average Speed   Time    Time     Current
                               Dload  Upload   Total     Spent    Left     Speed
100 25.6M  100 25.6M    0     0  8837k      0  0:00:02  0:00:02 --:--:-- 8838k
wordpress/
```

Configuration wp-config.php

```
cd /var/www/html
```

```
sudo cp wp-config-sample.php wp-config.php
```

```
sudo sed -i "s/database_name_here/$DB_NAME/" wp-config.php
```

```
sudo sed -i "s/username_here/$DB_USER/" wp-config.php
```

```
sudo sed -i "s/password_here/$DB_PASS/" wp-config.php
```

```
hurbt@raspberrypi:/tmp $ cd /var/www/html
sudo cp wp-config-sample.php wp-config.php
sudo sed -i "s/database_name_here/$DB_NAME/" wp-config.php
sudo sed -i "s/username_here/$DB_USER/" wp-config.php
sudo sed -i "s/password_here/$DB_PASS/" wp-config.php
hurbt@raspberrypi:/var/www/html $
```

✚ Ajoute en bas du fichier pour HTTPS via Proxy :

```
sudo nano wp-config.php
```

```
hurbt@raspberrypi:/var/www/html $ sudo nano wp-config.php
hurbt@raspberrypi:/var/www/html $
```

```
if (isset($_SERVER['HTTP_X_FORWARDED_PROTO']) &&
$_SERVER['HTTP_X_FORWARDED_PROTO'] === 'https') {

    $_SERVER['HTTPS'] = 'on';

}
```

```
hurbt@raspberrypi: /var/www  X  +  v
GNU nano 7.2 wp-config.php *
*
* For information on other constants that can be used for debugging,
* visit the documentation.
*
* @link https://developer.wordpress.org/advanced-administration/debug/debug-wordpress/
*/
define( 'WP_DEBUG', false );

/* Add any custom values between this line and the "stop editing" line. */

/* That's all, stop editing! Happy publishing. */

/** Absolute path to the WordPress directory. */
if ( ! defined( 'ABSPATH' ) ) {
    define( 'ABSPATH', __DIR__ . '/' );
}

/** Sets up WordPress vars and included files. */
require_once ABSPATH . 'wp-settings.php';

if (isset($_SERVER['HTTP_X_FORWARDED_PROTO']) && $_SERVER['HTTP_X_FORWARDED_PROTO'] === 'https') {
    $_SERVER['HTTPS'] = 'on';
}
|
```

Installation de NGINX Proxy Manager

Installation de Docker & Docker Compose

```
curl -sSL https://get.docker.com | sh
```

```
sudo usermod -aG docker $USER
```

```
sudo apt install docker-compose -y
```

```
hurbt@raspberrypi:/var/www/html $ curl -sSL https://get.docker.com | sh
sudo usermod -aG docker $USER
sudo apt install docker-compose -y
```

⚠ Déconnecte-toi et reconnecte-toi à la session SSH.

Déploiement de NGINX Proxy Manager

```
mkdir -p ~/nginx-proxy-manager
```

```
cd ~/nginx-proxy-manager
```

```
nano docker-compose.yml
```

```
Last login: Sun Oct 27 11:38:03 2020 from 192.168.1.13
hurbt@raspberrypi:~ $ mkdir -p ~/nginx-proxy-manager
cd ~/nginx-proxy-manager
nano docker-compose.yml
```

Contenu :

```
version: '3'
```

```
services:
```

```
  npm:
```

```
    image: jc21/nginx-proxy-manager:latest
```

```
    container_name: nginx-proxy-manager
```

```
    restart: always
```

```
    ports:
```

```
      - "80:80"
```

```
      - "81:81"
```

```
      - "443:443"
```

volumes:

- ./data:/data
- ./letsencrypt:/etc/letsencrypt

```
GNU nano 7.2                                     docker-compose.yml *
```

```
version: '3'
services:
  npm:
    image: jc21/nginx-proxy-manager:latest
    container_name: nginx-proxy-manager
    restart: always
    ports:
      - "80:80"
      - "81:81"
      - "443:443"
    volumes:
      - ./data:/data
      - ./letsencrypt:/etc/letsencrypt
```

🚩 Lancer :

docker-compose up -d

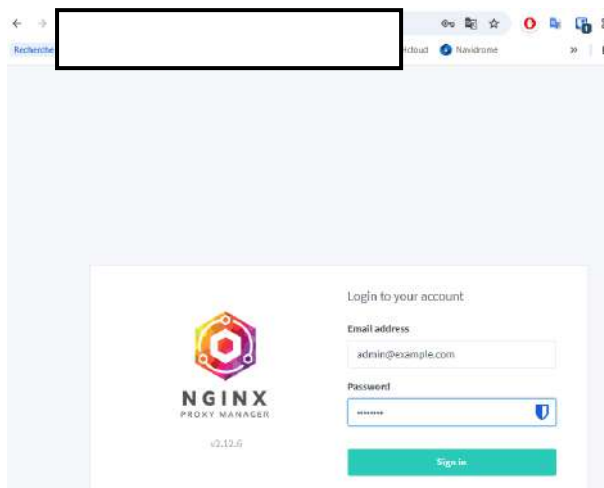
```
hurbt@raspberrypi:~/nginx-proxy-manager $ docker-compose up -d
```

🔒 Accès à l'interface de gestion NPM



Identifiants par défaut :

- Email : admin@example.com
- Mot de passe : changeme



 Modifie-les dès la première connexion.

Edit User

×

Full Name *

AdminHR

Nickname *

AdminHR

Email *

hugo.robet44@gmail.com

Cancel

Save

Configuration DNS sur OVH

1. Récupère ton IP publique :

curl ifconfig.me

2. Va sur <https://www.ovh.com/manager>
3. Menu : **Web Cloud > Domaines > rootbet.fr > Zone DNS**
4. Ajouter une entrée A :

Nom : portfolio

Type : A

Cible : <ton IP publique>

TTL : 3600

5. Vérification :

nslookup portfolio.rootbet.fr

Redirection des ports sur ta box

Port externe IP RPi Port interne Protocole

80		80	TCP
443		443	TCP

🌐 Configuration dans NGINX Proxy Manager

1. Proxy Hosts > Add Proxy Host

2. Domain Name : portfolio.rootbet.fr

3. Forward Hostname / IP :

4. Forward Port : 8080

5. SSL :

- ☒ Request a new SSL Certificate
- ☒ Force SSL

6. Ajouter proxy_set_header X-Forwarded-Proto \$scheme; dans Advanced

The image displays two side-by-side screenshots of the NGINX Proxy Manager 'New Proxy Host' configuration form.

Left Screenshot (Details Tab):

- Domain Names:** portfolio.rootbet.fr
- Scheme:** http
- Forward Hostname / IP:**
- Forward Port:** 8080
- Cache Assets:** ☐
- Block Common Exploits:** ☒
- Websockets Support:** ☒
- Access List:** Publicly Accessible

Right Screenshot (SSL Tab):

- SSL Certificate:** Request a new SSL Certificate
- Force SSL:** ☒
- HTTP/2 Support:** ☒
- HSTS Enabled:** ☐
- HSTS Subdomains:** ☐
- Use a DNS Challenge:** ☐
- Email Address for Let's Encrypt:** hugo.robet44@gmail.com
- I Agree to the Let's Encrypt Terms of Service:** ☒

Edit Proxy Host

×

⚡ Details

📁 Custom locations

🔒 SSL

⚙️ Advanced

These proxy details are available as nginx variables:

- `$server` Forward Hostname / IP
- `$port` Forward Port
- `$forward_scheme` Scheme

Custom Nginx Configuration

```
proxy_set_header X-Forwarded-Proto $scheme;
```

Page par défaut d'apache apparait lorsque je pointe sur <https://portfolio.rootbet.fr>

1. 🗑️ Supprime la page Apache par défaut :

```
sudo rm -f /var/www/html/index.html
```

⚠️ Cette page prend souvent le dessus sur index.php, ce qui empêche WordPress de se lancer.

2. 📁 Vérifie le contenu du dossier /var/www/html

Tu dois y voir au moins ces fichiers :

```
ls /var/www/html
```

Tu dois voir :

```
index.php wp-config.php wp-admin/ wp-content/ wp-includes/ ...
```

3. 🚀 Relance Apache :

```
sudo systemctl restart apache2
```

4. 🔄 Recharge NGINX Proxy Manager :

Même si tu viens de le redémarrer, on s'assure :

docker restart nginx-proxy-manager

Dans wp-config.php ajouter ces lignes ci au-dessus de ce commentaire « */* That's all, stop editing! Happy publishing. */* » (cela permet de faire la redirection entre http et https dû à mon reverse proxy)

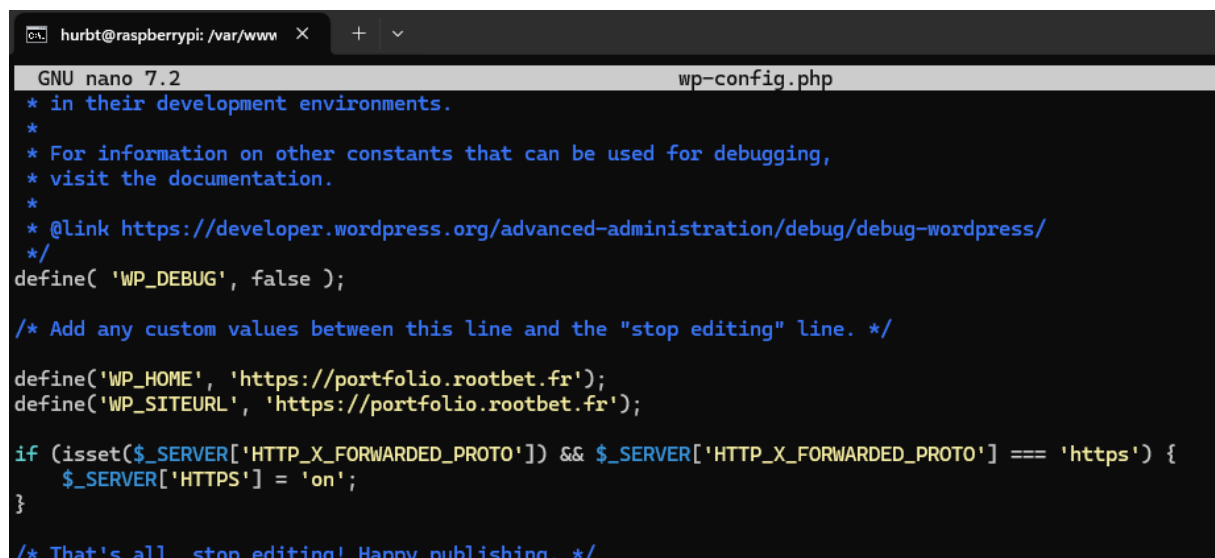
```
define('WP_HOME', 'https://portfolio.rootbet.fr');
```

```
define('WP_SITEURL', 'https://portfolio.rootbet.fr');
```

```
if (isset($_SERVER['HTTP_X_FORWARDED_PROTO']) &&
$_SERVER['HTTP_X_FORWARDED_PROTO'] === 'https') {

    $_SERVER['HTTPS'] = 'on';

}
```



```
GNU nano 7.2 wp-config.php
* in their development environments.
*
* For information on other constants that can be used for debugging,
* visit the documentation.
*
* @link https://developer.wordpress.org/advanced-administration/debug/debug-wordpress/
*/
define( 'WP_DEBUG', false );

/* Add any custom values between this line and the "stop editing" line. */

define('WP_HOME', 'https://portfolio.rootbet.fr');
define('WP_SITEURL', 'https://portfolio.rootbet.fr');

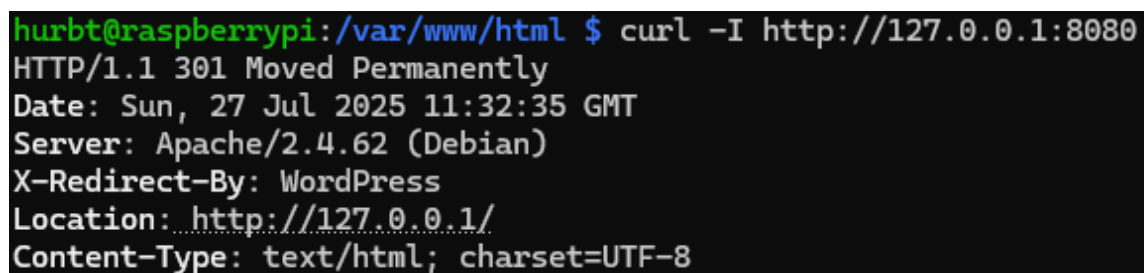
if (isset($_SERVER['HTTP_X_FORWARDED_PROTO']) && $_SERVER['HTTP_X_FORWARDED_PROTO'] === 'https') {
    $_SERVER['HTTPS'] = 'on';
}

/* That's all, stop editing! Happy publishing. */
```

Vérifications et Débogage

Test Apache localement :

curl -I <http://127.0.0.1:8080>



```
hurbt@raspberrypi:/var/www/html $ curl -I http://127.0.0.1:8080
HTTP/1.1 301 Moved Permanently
Date: Sun, 27 Jul 2025 11:32:35 GMT
Server: Apache/2.4.62 (Debian)
X-Redirect-By: WordPress
Location: http://127.0.0.1/
Content-Type: text/html; charset=UTF-8
```

Voir si Apache écoute :

sudo ss -tulpn | grep apache

```
hurbt@raspberrypi:/var/www/html $ sudo ss -tulpn | grep apache
tcp LISTEN 0      511                *:8080             *:*                users:((("apache2",pid=21826,fd=4),("apache2",pid=21816,fd=4),("apache2",pid=21815,fd=4),("apache2",pid=21814,fd=4),("apache2",pid=21813,fd=4),("apache2",pid=21812,fd=4),("apache2",pid=21810,fd=4)))
hurbt@raspberrypi:/var/www/html $
```

Redémarrer NGINX Proxy Manager:

docker restart nginx-proxy-manager

```
hurbt@raspberrypi:/var/www/html $ docker restart nginx-proxy-manager
nginx-proxy-manager
hurbt@raspberrypi:/var/www/html $
```

✔ Site accessible

Tu peux désormais accéder à ton WordPress sécurisé à l'adresse :

👉 <https://portfolio.rootbet.fr>

Bienvenue

Bienvenue dans la très célèbre installation en 5 minutes de WordPress ! Vous n'avez qu'à remplir les informations demandées ci-dessous et vous serez prêt à utiliser la plus extensible et puissante plateforme de publication de contenu au monde.

Informations nécessaires

Veuillez renseigner les informations suivantes. Ne vous inquiétez pas, vous pourrez les modifier plus tard.

Titre du site

Identifiant

Les identifiants ne peuvent utiliser que des caractères alphanumériques, des espaces, des tirets bas ("_"), des traits d'union ("-"), des points et le symbole @.

Mot de passe
Forte

Important : Vous aurez besoin de ce mot de passe pour vous connecter. Pensez à le stocker dans un lieu sûr.

Votre e-mail

Vérifiez bien cette adresse e-mail avant de continuer.

Visibilité par les moteurs de recherche ☐ Demander aux moteurs de recherche de ne pas indexer ce site.
Certains moteurs de recherche peuvent décider de l'indexer malgré tout.

[Installer WordPress](#)



Votre déconnexion a bien été effectuée.

Identifiant ou adresse e-mail

Mot de passe

☐ Se souvenir de moi

[Se connecter](#)

Mot de passe oublié ?

→ Aller sur Portfolio Hugo ROBET BTS SIO SISR.

Français [Modifier](#)

L'installation est ok :

