

Livable
Attendu

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Cette procédure à pour objectif de montrer comment je suis arrivé pas à pas à installer une instance sur AWS, installer un serveur WEB, installer MariaDB et création d'une base de données donc mon serveur LAMP pour héberger Word Press.

1. Création de l'instance sur AWS

L'instance que j'ai créée a pour but d'héberger mon serveur LAMP, on y retrouve différentes informations dont nous aurons besoin par la suite.

The screenshot displays the AWS Management Console for the EC2 service in the eu-north-1 region. The 'Instances' page shows a single instance named 'Mon WP' with ID 'i-022635ec06777f60d', which is currently in the 'En cours d'initialisation' (Pending) state. A callout box with the text 'Instance créé' points to this instance. Below the table, the details for the instance are expanded, showing various configuration parameters such as the public IP address (16.170.225.132), the instance type (t3.micro), and the VPC (vpc-0c89079f6b641b391).

Name	ID d'instance	État de l'instance	Type d'instance	Contrôle des stats	Statut d'alarme	Zone de dispon.	DNS IPv4 public	Adresse IPv4...	IP élastique	Adresses IP...	Surveillance	Nom du groupe de s...	Nom de clé
Mon WP	i-022635ec06777f60d	En cours d'...	t3.micro	Initialisation en c...	Afficher les alar...	eu-north-1b	ec2-16-170-225-132.eu...	16.170.225.132	-	-	disabled	launch-wizard-1	wordpresspau...

Détails de l'instance i-022635ec06777f60d (Mon WP)

- Résumé de l'instance**
 - ID d'instance: i-022635ec06777f60d
 - Adresse IPv6: -
 - Type de nom d'hôte: Nom de l'adresse IP: ip-172-31-37-216.eu-north-1.compute.internal
 - Réponse à un nom DNS de ressource privée: IPv4 (A)
 - Adresse IP attribuée automatiquement: 16.170.225.132 (IP publique)
 - Rôle IAM: -
- Adresse IPv4 publique**: 16.170.225.132 | [adresse ouverte](#)
- État de l'instance**: En cours d'initialisation
- Nom DNS de l'IP privé (IPv4 uniquement)**: ip-172-31-37-216.eu-north-1.compute.internal
- Type d'instance**: t3.micro
- ID de VPC**: vpc-0c89079f6b641b391
- ID de sous-réseau**: subnet-0fdaa0746c433ba43
- Adresses IPv4 privées**: 172.31.37.216
- DNS IPv4 public**: ec2-16-170-225-132.eu-north-1.compute.amazonaws.com | [adresse ouverte](#)
- Adresses IP élastiques**: -
- Recherche d'AWS Compute Optimizer**: [Inscrivez-vous à AWS Compute Optimizer pour obtenir des recommandations.](#) | [En savoir plus](#)
- Nom du groupe Auto Scaling**: -

2. Installation d'Apache2

Apache2 est un serveur WEB qui va nous permettre d'héberger notre site WEB.

Nous pouvons voir que j'ai utilisé une version 2.4.62 d'Apache.

```
(Reading database ... 29492 files and directories currently installed.)
Preparing to unpack .../tzdata_2025b-0+deb12u1_all.deb ...
Unpacking tzdata (2025b-0+deb12u1) over (2025a-0+deb12u1) ...
Preparing to unpack .../libfreetype6_2.12.1+dfsg-5+deb12u4_amd64.deb ...
Unpacking libfreetype6:amd64 (2.12.1+dfsg-5+deb12u4) over (2.12.1+dfsg-5+deb12u3) ...
Setting up tzdata (2025b-0+deb12u1) ...

Current default time zone: 'Etc/UTC'
Local time is now:    Mon Mar 31 15:41:57 UTC 2025.
Universal Time is now: Mon Mar 31 15:41:57 UTC 2025.
Run 'dpkg-reconfigure tzdata' if you wish to change it.

Setting up libfreetype6:amd64 (2.12.1+dfsg-5+deb12u4) ...
Processing triggers for libc-bin (2.36-9+deb12u10) ...
admin@ip-172-31-37-216:~$ sudo apt install apache2 -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdbm-compat4 libjansson4 liblua5.3-0 libperl5.36
  perl perl-modules-5.36 ssl-cert
Suggested packages:
  apache2-doc apache2-suexec-pristine | apache2-suexec-custom www-browser perl-doc libterm-readline-gnu-perl | libterm-readline-perl-perl make
  libtap-harness-archive-perl
The following NEW packages will be installed:
  apache2 apache2-bin apache2-data apache2-utils libapr1 libaprutil1 libaprutil1-dbd-sqlite3 libaprutil1-ldap libgdbm-compat4 libjansson4 liblua5.3-0
  libperl5.36 perl perl-modules-5.36 ssl-cert
0 upgraded, 15 newly installed, 0 to remove and 0 not upgraded.
Need to get 9699 kB of archives.
After this operation, 57.0 MB of additional disk space will be used.
Get:1 file:/etc/apt/mirrors/debian.list Mirrorlist [38 B]
Get:2 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 perl-modules-5.36 all 5.36.0-7+deb12u1 [2815 kB]
Get:3 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libgdbm-compat4 amd64 1.23-3 [48.2 kB]
Get:4 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libperl5.36 amd64 5.36.0-7+deb12u1 [4218 kB]
Get:5 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 perl amd64 5.36.0-7+deb12u1 [239 kB]
Get:6 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libapr1 amd64 1.7.2-3+deb12u1 [102 kB]
Get:7 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libaprutil1 amd64 1.6.3-1 [87.8 kB]
Get:8 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libaprutil1-dbd-sqlite3 amd64 1.6.3-1 [13.6 kB]
Get:9 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libaprutil1-ldap amd64 1.6.3-1 [11.8 kB]
Get:10 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 libjansson4 amd64 2.14-2 [40.8 kB]
Get:11 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 liblua5.3-0 amd64 5.3.6-2 [123 kB]
Get:12 https://cdn-aws.deb.debian.org/debian bookworm/main amd64 apache2-bin amd64 2.4.62-1~deb12u2 [1386 kB]
```

```
admin@ip-172-31-37-216:~$ sudo apache2ctl -v
Server version: Apache/2.4.62 (Debian)
Server built: 2024-10-04 15:21:08
admin@ip-172-31-37-216:~$
```

3. Installation php 8.2.28

```
Creating config file /etc/php/8.2/mods-available/zip.ini with new version
Setting up fontconfig-config (2.14.1-4) ...
Setting up php8.2-mbstring (8.2.28-1+deb12u1) ...

Creating config file /etc/php/8.2/mods-available/mbstring.ini with new version
Setting up libheif1:amd64 (1.15.1-1+deb12u1) ...
Setting up php-mbstring (2:8.2+93) ...
Setting up php8.2-xml (8.2.28-1+deb12u1) ...

Creating config file /etc/php/8.2/mods-available/dom.ini with new version

Creating config file /etc/php/8.2/mods-available/simplexml.ini with new version

Creating config file /etc/php/8.2/mods-available/xml.ini with new version

Creating config file /etc/php/8.2/mods-available/xmlreader.ini with new version

Creating config file /etc/php/8.2/mods-available/xmlwriter.ini with new version

Creating config file /etc/php/8.2/mods-available/xsl.ini with new version
Setting up php-zip (2:8.2+93) ...
Setting up php-xml (2:8.2+93) ...
Setting up php-pear (1:1.10.13+submodules+notgz+2022032202-2) ...
Processing triggers for libapache2-mod-php8.2 (8.2.28-1+deb12u1) ...
Processing triggers for sgml-base (1.31) ...
Setting up libfontconfig1:amd64 (2.14.1-4) ...
Processing triggers for libc-bin (2.36-9+deb12u10) ...
Processing triggers for man-db (2.11.2-2) ...
Setting up libgd3:amd64 (2.3.3-9) ...
Setting up php8.2-gd (8.2.28-1+deb12u1) ...

Creating config file /etc/php/8.2/mods-available/gd.ini with new version
Setting up php-gd (2:8.2+93) ...
Processing triggers for php8.2-cli (8.2.28-1+deb12u1) ...
Processing triggers for libc-bin (2.36-9+deb12u10) ...
Processing triggers for libapache2-mod-php8.2 (8.2.28-1+deb12u1) ...
admin@ip-172-31-37-216:~$ php -v
PHP 8.2.28 (cli) (built: Mar 13 2025 18:21:38) (NTS)
Copyright (c) The PHP Group
Zend Engine v4.2.28, Copyright (c) Zend Technologies
    with Zend OPcache v8.2.28, Copyright (c), by Zend Technologies
admin@ip-172-31-37-216:~$
```

Ici j'ai installé php8.2.2z

4. Installation MariaDB Server

Maintenant l'installation de la base de donnée, j'ai choisi MariaDB en version 15.1.

```
... 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
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] Y
... Success!

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]
... 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]
- 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]
... Success!

Cleaning up...

All done! If you've completed all of the above steps, your MariaDB
installation should now be secure.

Thanks for using MariaDB!
admin@ip-172-31-37-216:~$ mariadb -V
mariadb Ver 15.1 Distrib 10.11.11-MariaDB, for debian-linux-gnu (x86_64) using EditLine wrapper
admin@ip-172-31-37-216:~$
```

5. Création de la base donnée

Une fois MariaDB installé, je créer la base de donnée pour word press ainsi qu'un utilisateur administrateur pour cette base de donnée ensuite nous lui donnons tous les droits sur cette base de donnée.

```
admin@ip-172-31-47-133:/tmp$ mysql -u root -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MariaDB connection id is 39
Server version: 10.11.11-MariaDB-0+deb12u1 Debian 12

Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.

Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.

MariaDB [(none)]> create database wordpress_ais;
Query OK, 1 row affected (0.000 sec)

MariaDB [(none)]> CREATE USER amin_paul@localhost IDENTIFIED BY ' ';
Query OK, 0 rows affected (0.002 sec)

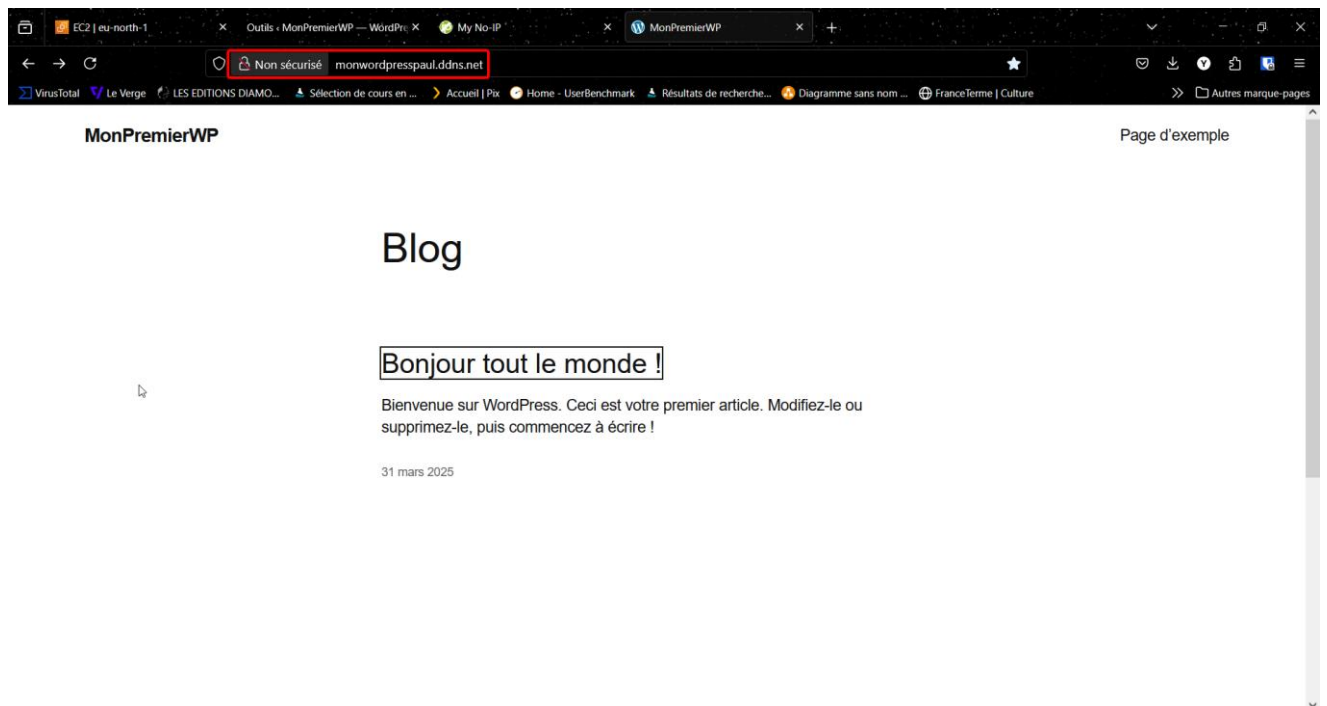
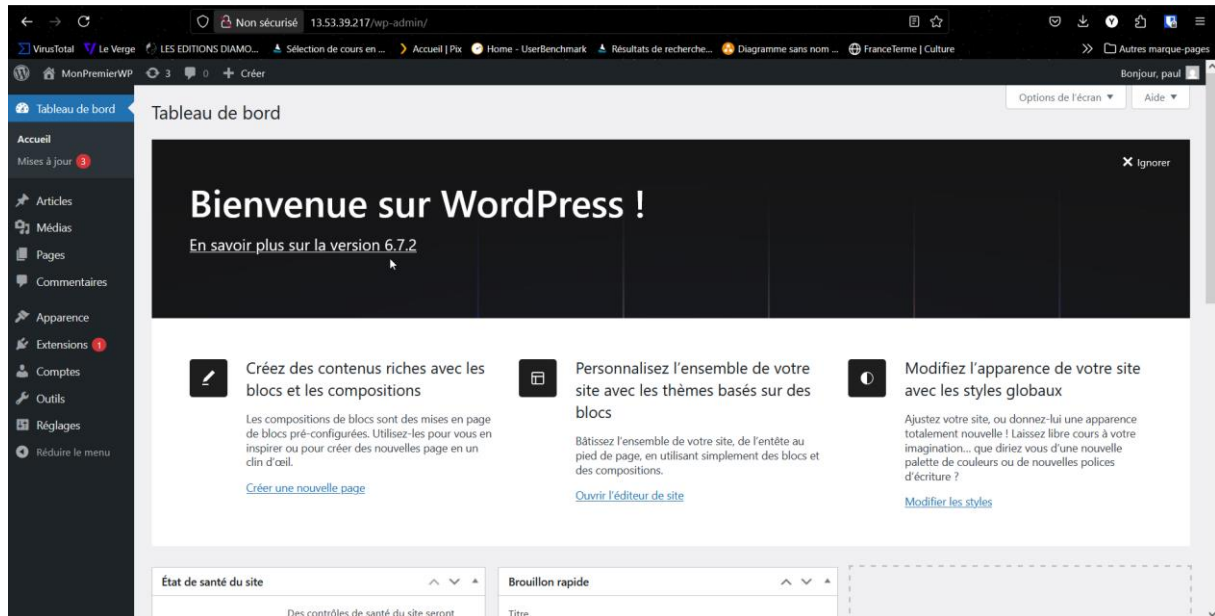
MariaDB [(none)]> GRANT ALL PRIVILEGES ON wordpress.* TO amin_paul@localhost IDENTIFIED BY " ";
Query OK, 0 rows affected (0.001 sec)

MariaDB [(none)]> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.000 sec)

MariaDB [(none)]>
MariaDB [(none)]> EXIT;
Bye
admin@ip-172-31-47-133:/tmp$
```

6. WordPress est installé sans certificat

Installation de WordPress (j'ai oublié de prendre les commandes en screen...) pour installer WordPress il est nécessaire de le télécharger l'archive ensuite de le décompresser dans /var/www/html



Pour le DNS j'ai choisi d'utiliser « No Ip » qui m'a permis de pointer l'adresse IP du serveur avec un nom de domaine.

7. Déploiement du certificat avec le client Certbot + Certificat Let's Encrypt

Pour le déploiement du certificat, j'ai décidé d'utiliser le client Certbot, je ne connaissais pas certbot alors j'ai effectué quelques recherches concernant celui-ci. J'ai appris qu'il permettait d'automatiser la configuration de certificats pour des sites internet et qui utilise « Let's Encrypt ».

```
Processing triggers for man-db (2.11.2-2) ...
Processing triggers for libc-bin (2.36-9+deb12u10) ...
admin@ip-172-31-47-133:~$ sudo certbot --apache -d monwordpresspaul.ddns.net
Saving debug log to /var/log/letsencrypt/letsencrypt.log
Enter email address (used for urgent renewal and security notices)
(Enter 'c' to cancel): vapaul@hotmail.fr

-----
Please read the Terms of Service at
https://letsencrypt.org/documents/LE-SA-v1.5-February-24-2025.pdf. You must
agree in order to register with the ACME server. Do you agree?
-----
(Y)es/(N)o: Y

-----
Would you be willing, once your first certificate is successfully issued, to
share your email address with the Electronic Frontier Foundation, a founding
partner of the Let's Encrypt project and the non-profit organization that
develops Certbot? We'd like to send you email about our work encrypting the web,
EFF news, campaigns, and ways to support digital freedom.
-----
(Y)es/(N)o: n
Account registered.
Requesting a certificate for monwordpresspaul.ddns.net

Successfully received certificate.
Certificate is saved at: /etc/letsencrypt/live/monwordpresspaul.ddns.net/fullchain.pem
Key is saved at: /etc/letsencrypt/live/monwordpresspaul.ddns.net/privkey.pem
This certificate expires on 2025-06-29.
These files will be updated when the certificate renews.
Certbot has set up a scheduled task to automatically renew this certificate in the background.

Deploying certificate
Successfully deployed certificate for monwordpresspaul.ddns.net to /etc/apache2/sites-available/wordpress-le-ssl.conf
Congratulations! You have successfully enabled HTTPS on https://monwordpresspaul.ddns.net

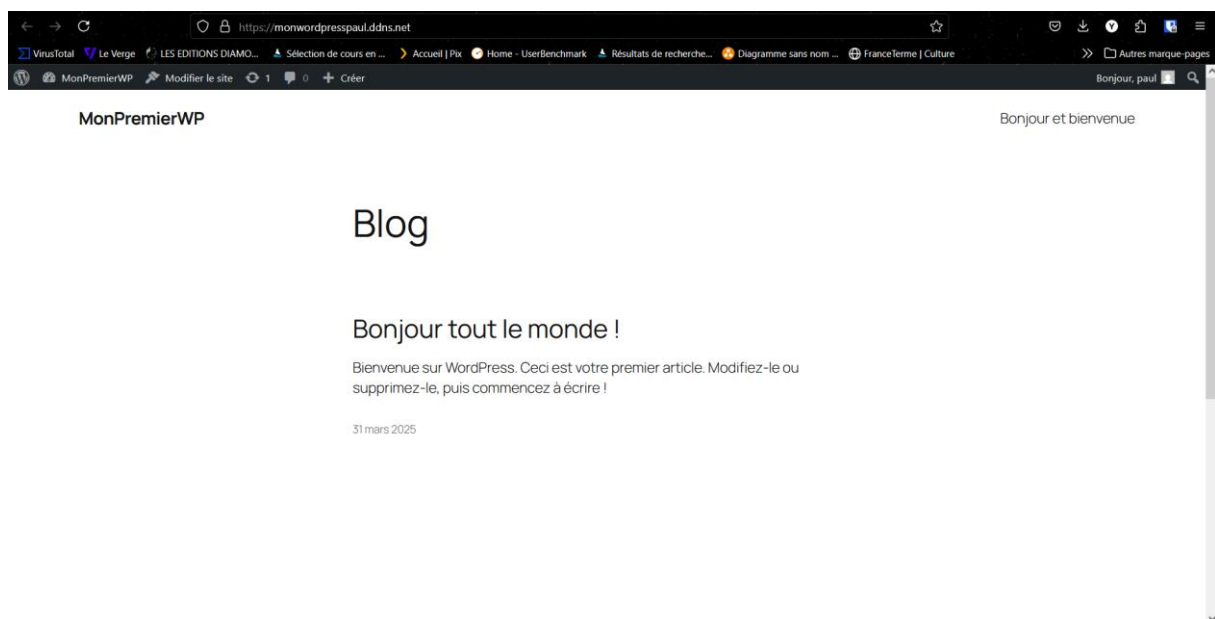
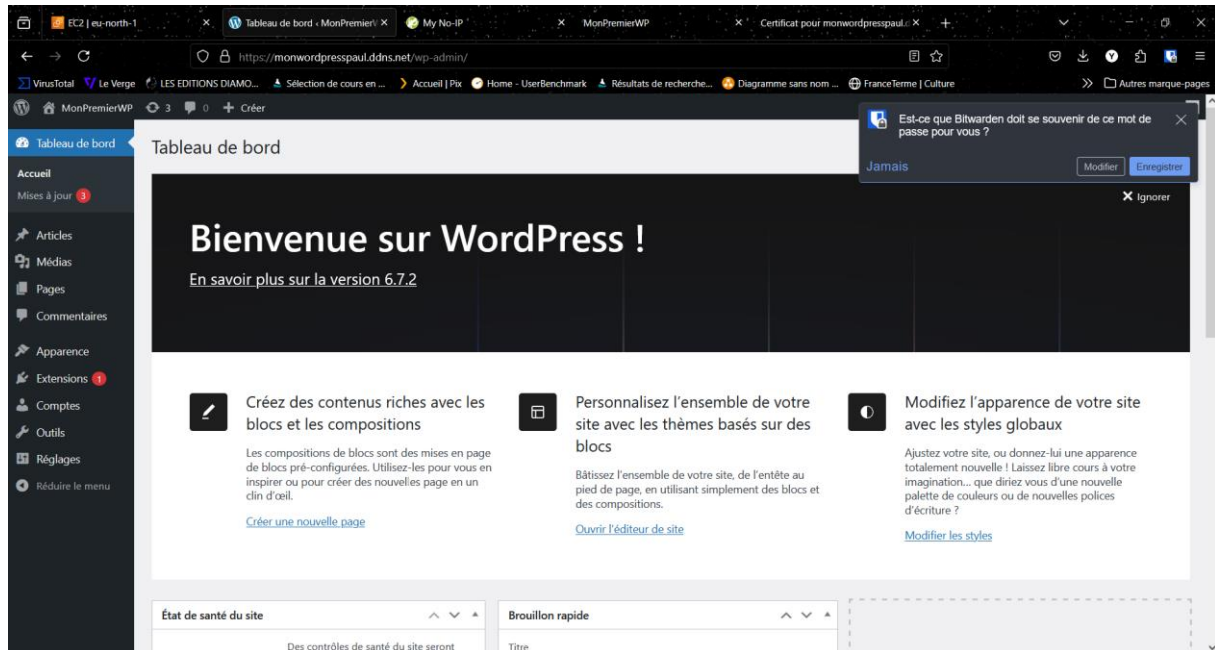
-----
If you like Certbot, please consider supporting our work by:
* Donating to ISRG / Let's Encrypt: https://letsencrypt.org/donate
* Donating to EFF: https://eff.org/donate-le
-----
admin@ip-172-31-47-133:~$
```

The screenshot shows a Firefox browser window with the address bar displaying the certificate details for `monwordpresspaul.ddns.net`. The page title is "Certificat". The certificate information is displayed in a structured format:

monwordpresspaul.ddns.net		E6	ISRG Root X1
Nom du sujet			
Nom courant		monwordpresspaul.ddns.net	
Nom de l'émetteur			
Pays		US	
Organisation		Let's Encrypt	
Nom courant		E6	
Validité			
Pas avant		Mon, 31 Mar 2025 16:15:28 GMT	
Pas après		Sun, 29 Jun 2025 16:15:27 GMT	
Noms alternatifs du sujet			
Nom DNS		monwordpresspaul.ddns.net	
Informations sur la clé publique			
Algorithme		Elliptic Curve	
Taille de la clé		256	
Valeur publique		04:9D:58:D9:8D:31:3C:1B:B8:F9:D2:A2:60:33:0E:78:0E:29:91:C8:8F:E5:2D:6D:1F:...	

8. Et voilà le Backoffice du CMS

Une fois le certificat configuré nous revoilà sur le backoffice et la page WEB avec le certificat.



9. Vous trouverez ci-dessous le lien pointant vers mon WordPress
<https://monwordpresspaul.ddns.net>

10. Défis de cybersécurité avec RootMe

Voici la capture d'écran avec mon score total sur RootMe

