

Installation and configuration guide

- [WHMCS setup\(install/update\)](#)
- [Setup guide: PowerDNS setup](#)
- [Add server \(PowerDNS server\)](#)
- [Product Configuration](#)

WHMCS setup(install/update)

PowerDNS module **WHMCS**

[Order now](#) | [Download](#) | [FAQ](#)

To install and update a module, you must perform one and the same action.

1. Download the latest version of the module.

PHP 8.1

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-PowerDNS/PUQ_WHMCS-PowerDNS-latest.zip
```

PHP 7.4

```
wget http://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-PowerDNS/php74/PUQ_WHMCS-PowerDNS-latest.zip
```

All versions are available via link:

https://download.puqcloud.com/WHMCS/servers/PUQ_WHMCS-PowerDNS/

2. Unzip the archive with the module.

```
unzip PUQ_WHMCS-PowerDNS-latest.zip
```

3. Copy and Replace "puqPowerDNS" to

"WHMCS_WEB_DIR/modules/servers/"

Setup guide: PowerDNS setup

PowerDNS module **WHMCS**

[Order now](#) | [Download](#) | [FAQ](#)

Disclaimer: This guide is intended for informational purposes only and provides a basic example of how to enable the API in PowerDNS. It is strongly recommended to refer to the official PowerDNS documentation for comprehensive and accurate instructions. Following official guidelines ensures that your setup is secure, reliable, and fully supported. This example may not cover all security considerations or configurations required for your specific environment. Use this guide at your own risk.

Install PowerDNS

Update the System

It is always safe to work with a system that is up-to-date. Updating your Debian system can be done using the simple command:

```
sudo apt update && sudo apt upgrade
```

Install the required tools:

```
sudo apt install curl vim git libpq-dev -y
```

Once all the packages have been updated to their latest stable versions, proceed with the below steps.

1 – Install PowerDNS Relational Database

PowerDNS supports innumerable database backends such as MySQL, PostgreSQL, Oracle e.t.c. Here, we will use the MariaDB as backend storage for PowerDNS zone files.

Install MariaDB on Debian using the below steps:

First, install the required tools:

```
sudo apt install software-properties-common gnupg2 -y
```

Then proceed and the MariaDB 10.6 repository on the system.

```
curl -LsS -O https://downloads.mariadb.com/MariaDB/mariadb_repo_setup  
sudo bash mariadb_repo_setup
```

Update your package index and install MariaDB.

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

Once the installation is complete, start and enable MariaDB.

```
sudo systemctl start mariadb  
sudo systemctl enable mariadb
```

Login to the shell using the *root* user

```
sudo mysql -u root
```

Now create a PowerDNS database.

```
CREATE DATABASE powerdns;  
GRANT ALL ON powerdns.* TO 'powerdns_user'@ '%' IDENTIFIED BY 'Strongpassword' ;  
FLUSH PRIVILEGES;  
EXIT
```

Remember the password set for the user should ***not contain special characters*** since PowerDNS doesn't like this and will cause the error “**Access denied for user ‘powerdns_user’@‘localhost’ (using password: YES)**”

2 – Install PowerDNS on Debian

We will begin by disabling the **systemd-resolved** service. This service runs on port **53** providing network name resolution used to load applications but now we want to use PowerDNS.

Stop and disable **systemd-resolved** using the commands:

```
sudo systemctl stop systemd-resolved
sudo systemctl disable systemd-resolved
```

Proceed and remove the symbolic link for the file.

```
$ ls -lh /etc/resolv.conf
-rw-r--r-- 1 root root 49 Feb 23 04:53 /etc/resolv.conf
$ sudo unlink /etc/resolv.conf
```

Update the **resolv.conf** file.

```
$ sudo vim /etc/resolv.conf
nameserver 8.8.8.8
```

After the above adjustments, you can install PowerDNS from the default APT repositories using the command:

```
sudo apt install pdns-server pdns-backend-mysql
```

Install the latest release of PowerDNS available on the official [PowerDNS release](#) page. As of this guide, the stable release was at 4.6. The repository for this release can be added to the system as below.

```
sudo vim /etc/apt/sources.list.d/pdns.list
```

For **Debian 12**

```
deb [arch=amd64] http://repo.powerdns.com/debian bookworm-auth-46 main
```

For **Debian 11**

```
deb [arch=amd64] http://repo.powerdns.com/debian bullseye-auth-46 main
```

For **Debian 10**

```
deb [ arch=amd64 ] http://repo.powerdns.com/debian buster-auth-46 main
```

Import the GPG key signing for the repository.

```
curl -fsSL https://repo.powerdns.com/FD380FBB-pub.asc | sudo gpg --dearmor -o  
/etc/apt/trusted.gpg.d/pdns.gpg
```

Set the APT preferences.

```
$ sudo vim /etc/apt/preferences.d/pdns  
Package: pdns-*  
Pin: origin repo.powerdns.com  
Pin-Priority: 600
```

Update your APT package index.

```
sudo apt update
```

Now install the PowerDNS server and the MySQL backend as below.

```
sudo apt install pdns-server pdns-backend-mysql
```

3 – Configure the PowerDNS Database

Now that we have the PowerDNS database already created on MariaDB, we will proceed and import the database schemas to it. This normally saved under the ***/usr/share/pdns-backend-mysql/schema/*** as a ***schema.mysql.sql*** file.

Now import this schema to the created database(**powerdns**) in step 1.

```
mysql -u powerdns_user -p powerdns < /usr/share/pdns-backend-mysql/schema/schema.mysql.sql
```

You can then verify schema import as below.

```
sudo mysql -u root  
use powerdns;  
show tables;
```

After the schema has been imported, we will now configure the PowerDNS connection details to

the database.

This can be done by creating the file below.

```
sudo vim /etc/powerdns/pdns.d/pdns.local.gmysql.conf
```

In the opened file, edit the lines:

```
# MySQL Configuration
# Launch gmysql backend
launch+=gmysql
# gmysql parameters
gmysql-host=127.0.0.1
gmysql-port=3306
gmysql-dbname=powerdns
gmysql-user=powerdns_user
gmysql-password=Strongpassword
gmysql-dnssec=yes
# gmysql-socket=
```

Set the appropriate permissions for the file.

```
sudo chown pdns: /etc/powerdns/pdns.d/pdns.local.gmysql.conf
sudo chmod 640 /etc/powerdns/pdns.d/pdns.local.gmysql.conf
```

You can now verify the database connection.

```
sudo systemctl stop pdns.service
sudo pdns_server --daemon=no --guardian=no --loglevel=9
```

With the above output, the database connection is successful. Restart and enable the PowerDNS service.

```
sudo systemctl restart pdns
sudo systemctl enable pdns
```

Verify the port 53 is open for DNS.

```
sudo ss -alnp4 | grep pdns
```

Output:


```
udp    UNCONN 0      0          0.0.0.0: 53      0.0.0.0: *
users: ( ("pdns_server", pid=18530, fd=5) )

tcp    LISTEN 0      128        0.0.0.0: 53      0.0.0.0: *
users: ( ("pdns_server", pid=18530, fd=7) )
```

You can also check if PowerDNS is responding to requests.

```
$ dig @127.0.0.1

; <<>> DiG 9.16.22-Debian <<>> @127.0.0.1
; (1 server found)
;; global options: +cmd
;; Got answer:
;; ->HEADER<<- opcode: QUERY, status: REFUSED, id: 4882
;; flags: qr rd; QUERY: 1, ANSWER: 0, AUTHORITY: 0, ADDITIONAL: 1
;; WARNING: recursion requested but not available

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 1232
;; QUESTION SECTION:
;. IN NS

;; Query time: 4 msec
;; SERVER: 127.0.0.1#53(127.0.0.1)
;; WHEN: Wed Feb 23 06:03:49 EST 2022
;; MSG SIZE rcvd: 28
```

To enable the API in PowerDNS

1 – Edit the PowerDNS Configuration File

The configuration file for PowerDNS is usually located at `/etc/powerdns/pdns.conf`. Open it for editing:

```
sudo nano /etc/powerdns/pdns.conf
```

2 – Enable the API

Find and modify the following lines, or add them if they are not present:

```
api=yes
webserver=yes
webserver-address=0.0.0.0
webserver-port=8081
```

- `api=yes`: Enables the API.
- `webserver=yes`: Enables the web server for accessing the API.
- `webserver-address=0.0.0.0`: Configures the server to listen on all IP addresses. If you want to restrict access to a specific IP, specify that IP address here.
- `webserver-port=8081`: Specifies the port on which the API web server will be available (default is 8081).

3 – Configure Access from Another Server

To allow access to the API from another server, set up authentication by adding the following line in `pdns.conf`:

```
api-key=your_api_key_here
```

- `api-key=your_api_key_here`: Set the API key that will be used to authenticate requests to the API. Replace `your_api_key_here` with a strong, secure key.

4 – Restart PowerDNS

After making these changes, restart PowerDNS to apply them:

```
sudo systemctl restart pdns
```

5 – Test the API

From another server, test the API by making a request using the API key, for example:

```
curl -X GET -H 'X-API-Key: your_api_key_here'  
http://ip_address_of_pdns_server:8081/api/v1/servers
```

Replace `your_api_key_here` with your API key and `ip_address_of_pdns_server` with the IP address of the server where PowerDNS is installed.

Add server (PowerDNS server)

PowerDNS module **WHMCS**

[Order now](#) | [Download](#) | [FAQ](#)

Add a new server to the system WHMCS.

System Settings->Servers->Add New Server

- Enter the correct **Name** and **Hostname**

Servers

Edit Server

Name	<input type="text" value="powerdns-test.uuq.pl"/>
Hostname	<input type="text" value="powerdns-test.uuq.pl"/>
IP Address	<input type="text"/>
Assigned IP Addresses (One per line)	<div></div>
Monthly Cost	<input type="text" value="0.00"/>
Datacenter/NOC	<input type="text"/>
Maximum No. of Accounts	<input type="text" value="200"/>
Server Status Address	<div><input type="text"/> To display this server on the server status page, enter the full path to the server status folder (required to be uploaded to each server you want to monitor) - eg. https://www.example.com/status/</div>
Enable/Disable	<input type="checkbox"/> Check to disable this server

- In the **Server Details** section, select the "**PUQ PowerDNS**" module and enter the **correct PowerDNS API key** in the **password field**.
- To check, click the "**Test connection**" button

Server Details

Module	<div><div>PUQ PowerDNS</div><div>▼</div></div> <div><input type="button" value="Test Connection"/></div> <div>✓ Connection successful. Some values have been auto-filled.</div>
Username	<input type="text"/>
Password	<input type="password" value="....."/>
Access Hash	<div></div>
Secure	<input type="checkbox"/> Check to use SSL Mode for Connections
Port	<div><input type="text" value="8081"/> <input type="checkbox"/> Override with Custom Port</div>

Product Configuration

PowerDNS module **WHMCS**

[Order now](#) | [Download](#) | [FAQ](#)

Add new product to WHMCS

System Settings->Products/Services->Create a New Product

In the **Module settings** section, select the "**PUQ PowerDNS**" module

Details	Pricing	Module Settings	Custom Fields	Configurable Options	Upgrades	Free Domain	Cross-sells	Other	Links
Module Name <input type="text" value="PUQ PowerDNS"/>									
Server Group <input type="text" value="None"/>									
License key <input type="text" value="PZNRXN...DOUOL2"/> success: 2024-09-29T13:50:30+02:00									
Max Zones <input type="text" value="6"/> The number of zones that allows you to add									
Edit SOA <input type="text" value="Yes"/>									
Restrictions Allow client to edit SOA record									
Zone name filter <input type="text"/>									
Each regular expression on a new line									
Nameserver 1 <input type="text" value="ns1.puqcloud.com"/>									
Nameserver 2 <input type="text" value="ns2.puqcloud.com"/>									
Nameserver 3 <input type="text" value="ns3.puqcloud.com"/>									
Nameserver 4 <input type="text" value="ns4.puqcloud.com"/>									
Zone administrator email <input type="text" value="admin@puqcloud.com"/>									
Update interval <input type="text" value="86400"/> Default - 86400									
Retry interval <input type="text" value="7200"/> Default - 7200									
Expiry time <input type="text" value="3600000"/> Default - 3600000									
Minimum lifetime <input type="text" value="3600"/> Default - 3600									

- **License key:** A pre-purchased license key for the "**PUQ PowerDNS**" module. For the module to work correctly, the key must be active
- **Max Zones:** The number of zones that will be available for the client to manage.
- **Edit SOA:** Whether to allow the client to manage the SOA record.
- **Zone name filter:** In this field, you can enter regular expressions to filter zone names that the client can add. Each filter should be on a separate line, and each filter is checked in sequence, meaning the zone will not be added if even one filter matches.
- **Nameservers:** In this section, enter the name servers that will be added to the zone (Your DNS cluster).

- **SOA:** In this section, enter all the SOA record parameters that will be used by default.