

# ZeroCool

## Overview

ZeroCool is the external server hosted at Hetzner and houses the majority of the tech infrastructure for the hackspace including

1. Members System - <https://members.hacman.org.uk>
2. Main Website - <https://www.hacman.org.uk>
3. Moodle (Training/Induction System) - <https://moodle.hacman.org.uk>
4. Wiki (Archive) <https://wiki.hacman.org.uk>
5. Forum (Discourse) <https://list.hacman.org.uk>
6. Helpdesk <https://help.hacman.org.uk>
7. Database Server (MySQL)

Setup by Rossy in November 2018 this contains the heart of our infrastructure

## Reverse Proxy

The server is setup with a reverse proxy that uses automatic configuration to set the forwarding of the sub domain to the correct docker instance rather than manually needing configured. This is based on the following docker file <https://github.com/nginx-proxy/nginx-proxy.git> and the setup process is detailed [here](#)

## Web Servers

Each webserver with the exception of discourse is based on <https://github.com/sprintcube/docker-compose-lamp/tree/7.2.x> (<https://github.com/sprintcube/docker-compose-lamp/tree/7.2.x>) with amended docker-compose.yml files to work with the reverse proxy including removing the mysql, phpmyadmin and redis installs. Each webserver has a .env file which contains certain environment settings.

Each webserver can be connected to via ssh from within Zerocool using the command

```
docker exec -it container id (run docker-ps to find this) /bin/bash
```

## Sample Docker Compose file

Example of the Docker Compose File (in this instance it was for the main site) can be found below alongside a copy of the .env file

```
version: '3.6'

services:
```

nginx:

image: nginx:latest

container\_name: wordpress-website

volumes:

- ./nginx:/etc/nginx/conf.d
- ./logs/nginx:/var/log/nginx
- ./wordpress:/var/www/html
- ./certs:/etc/letsencrypt
- ./certs-data:/data/letsencrypt

links:

- wordpress

restart: always

environment:

VIRTUAL\_HOST: www.hacman.org.uk,hacman.org.uk

VIRTUAL\_PORT: 80

LETSencrypt\_HOST: www.hacman.org.uk,hacman.org.uk

LETSencrypt\_EMAIL: REMOVED

expose:

- 80

wordpress:

image: wordpress:php7.2-fpm

container\_name: wordpress

volumes:

- ./wordpress:/var/www/html

environment:

```
- WORDPRESS_DB_NAME=REMOVED  
  
- WORDPRESS_TABLE_PREFIX=REMOVED  
  
- WORDPRESS_DB_HOST=REMOVED  
  
- WORDPRESS_DB_USER=REMOVED  
  
- WORDPRESS_DB_PASSWORD=REMOVED
```

```
restart: always
```

```
networks:
```

```
default:
```

```
external:
```

```
name: nginx-proxy
```

### Sample .env file

```
DOCUMENT_ROOT=./www  
VHOSTS_DIR=./config/vhosts  
APACHE_LOG_DIR=./logs/apache2  
PHP_INI=./config/php/php.ini  
MYSQL_DATA_DIR=./data/mysql  
MYSQL_LOG_DIR=./logs/mysql
```

## Mysql Server

The Mysql server runs Mysql version 5.7 Direct Database access is only available through an SSH Tunnel Internal IP for the Database Server is REMOVED Currently there is one MYSQL server with multiple databases within it and different user(s) per database

### Members (<https://members.hacman.org.uk>)

This is a forked version of Build Brighton Membership System and can be found on github. Setup is fairly simple and requires a webserver running php with composer and larvell installed. Permissions may need to be edited for /storage and /bootstrap/cache for the install to work.

Apache Vhost needs to be configured with /members/public as the document root but /members needs to be accessible to apache

You also need a .env file within the members directory

Buddy.works is used to run the member system billing script that requires to be run each day to bill

members.

## **Moodle (<https://moodle.hacman.org.uk>)**

Standard moodle install, uses external database authentication to sync login with the membership system.

## **The Bikeshed aka the Forum (<https://list.hacman.org.uk>)**

Standard Discourse install operates on a separate ip to the rest of the server

## **Main Website (<https://www.hacman.org.uk>)**

Public Facing Website based on wordpress with avada theme. Members have editing privileges to the website to update it

## **Wiki (Archived) (<https://wiki.hacman.org.uk>)**

Mediawiki Install – Requires a separate login and will shortly be in archived

## **Helpdesk (<https://help.hacman.org.uk>)**

Helpdesk Ticketing system for teams and sub committees to use to manage requests, emails etc based on OS ticket (Login is restricted to members of teams and subcommittees)

## **SMTP Server**

Until recently this was hosted with mailgun for free however due to the introduction of charges for that it we now currently use a mixture of Amazon Simple Email Service and smtp2go and is used for sending transactional email from each of the systems above

## **SSH**

The Zerocool server is restricted to ssh access for security and GDPR reasons this is restricted to a number of key people only

## **Status**

We use uptimebot to monitor each server application including the space internet itself, the systems can be checked using the status page at <https://status.hacman.org.uk>

## DNS Managmeent

All DNS management is done via cloudflare

## Backups

The Database server is backup on a daily basis using sqlbak to a dedicated google drive Backups are stored for 30 days

Daily File Backups are done and stored on google drive, these are kept for 2 days (space limitations)

From:

<http://testwiki.hecatron.com/> - **Hacman DEMO ONLY**

Permanent link:

<http://testwiki.hecatron.com/doku.php?id=infrastructure:overview>

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