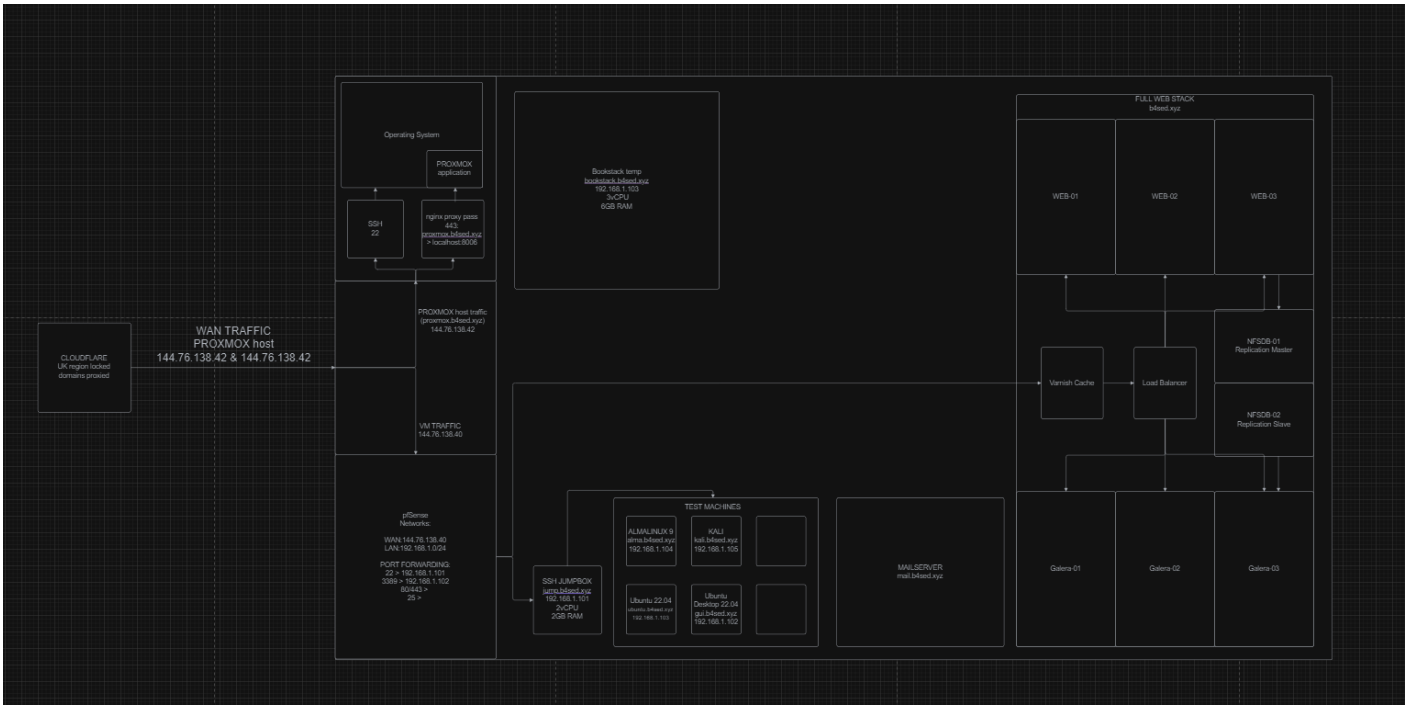
My Solution

notes regarding my personal server solution, feel free to have a look

- Overview
- Proxmox
    - Installing & launching a PROXMOX server
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    - DB Cluster
- NEW
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Overview


Operating System
PROXMOX application
SSH 22
nginx proxy pass 443: proxmox.b4sed.xyz > localhost:8006
Bookstack temp
bookstack.b4sed.xyz
192.168.1.103
3vCPU
6GB RAM
FULL WEB STACK
b4sed.xyz
WEB-01
WEB-02
WEB-03
CLOUDFLARE
UK region locked domains proxied
WAN TRAFFIC
PROXMOX host
144.76.138.42 & 144.76.138.42
PROXMOX host traffic (proxmox.b4sed.xyz) 144.76.138.42
VM TRAFFIC
144.76.138.40
Varnish Cache
Load Balancer
NFSDB-01
Replication Master
NFSDB-02
Replication Slave
pfSense
Networks:
WAN 144.76.138.40
LAN 192.168.1.0/24
PORT FORWARDING:
22 > 192.168.1.101
3389 > 192.168.1.102
80/443 >
25 >
TEST MACHINES
ALMALINUX 9
almx.b4sed.xyz
192.168.1.104
KALI
kali.b4sed.xyz
192.168.1.105
Ubuntu 22.04
ubuntu.b4sed.xyz
192.168.1.103
Ubuntu Desktop 22.04
gui.b4sed.xyz
192.168.1.102
SSH JUMPBOX
jump.b4sed.xyz
192.168.1.101
2vCPU
2GB RAM
MAILSERVER
mail.b4sed.xyz
Galera-01
Galera-02
Galera-03

Proxmox

Installing & launching a PROXMOX server

==========

Installation

PROXMOX ISO download:

https://www.proxmox.com/en/downloads/proxmox-virtual-environment/iso

Network Configuration

PfSense

Networking for my VMs is done through pfSense, which is basically an router/firewall OS installed onto a VM, and configured to pass network traffic from the WAN network (144.76.138.40) to the LAN network (192.168.1.1/24) via a network bridge.

For more information on my PfSense configuration, see here.

pfSense

Self Hosted

Self Hosted

Flame

Flame is essentially just a web dashboard for accessing your other self hosted apps.

Installation

https://github.com/pawelmalak/flame/wiki/Installation-without-Docker#prerequisites

Self Hosted

BookStack

Bookstack is a self-hosted notes platform that you're currently using to read this.

Installation

https://jardin.icamole.site/books/bookstack/page/installation

Backup and restore process

https://www.bookstackapp.com/docs/admin/backup-restore/

Side note on the restore process - I opted to use this method for migrating my existing bookstack configuration for Hetzner Cloud to Hetzner Bare-Metal. While the migration process itself wasn't too difficult, I did run into a few issues - most likely because I was also migrating from docker to none-docker. TLDR; you may have to manually create some of the MySQL table colums.

Self Hosted

Firefly 3

Firefly 3 is a self hosted finance tracking application.

Self Hosted

Planka

Planka is a self hosted 'to-do-list' application.

Self Hosted

Authelia

Authelia is a 2FA application that I use for protecting access to my web apps.

Backups

Off-Site Backups

Local Backups

Local backups are performed via cronjobs configured on a per server basis, depending on the files & databases required.

BookStack Backups

Database backups are performed using the mysqldump command, and using a dedicated 'backup' mysql user, with read only privilege:

```
##CREATE MySQL Backups User##
CREATE USER 'backup'@'localhost' IDENTIFIED BY 'password';

##GRANT Privilege to Backup User##
GRANT SELECT ON *.* TO 'backup'@'localhost';

##pull in update mysql user privilege
flush privileges;

##Give MySQL default mysqldump user options##
vim /root/.my.cnf
[mysqldump]
user=bookstack
password=password

##restart mysql##
systmctl restart mysql

##Cronjob for backups to run##
crontab -e
0 23 * * * DATE=`date +%y-%m-%d`; mysqldump -u backup bookstack --no-tablespaces | gzip >
/bookstack-backups/database/bookstack-$DATE.sql.gz | rsync -a /bookstack-
backups/database/bookstack-$DATE.sql.gz root@backup.b4sed.xyz:/backups/bookstack/database |
find /bookstack-backups/database -name "*.gz" -type f -mtime +7 -delete
```

File level backups are performed using the tar command, the zipped file is then transferred to the remote backup server via rsync:

```
DATE=`date +%y-%m-%d`;tar -aP -cf /bookstack-backups/file/bookstack_file-$DATE.gz
/var/www/BookStack |rsync -a /bookstack-backups/file/bookstack_file-$DATE.gz
root@backup.b4sed.xyz:/backups/bookstack/file | find /bookstack-backups/file -name "*.gz" -
type f -mtime +7 -delete
```

Bookstack Web Solution

The solution used for hosting this site.

MySQL Replication

DB Cluster

NEW

NEW

Update Procedure

OS Maintenance

Core Pi

```
sudo apt update
sudo apt full-upgrade -y
sudo apt autoremove --purge -y
```

```
sudo reboot
```

Home Pi

```
sudo apt update
sudo apt full-upgrade -y
sudo apt autoremove --purge -y
```

```
sudo reboot
```

NAS