XIBO CMS WITH DOCKER FOR UBUNTU 22.04

Check for update

```
Unset

sudo apt update
```

Install Docker

```
Unset

apt install docker.io docker-compose
```

That's all the dependencies for Xibo installed.

uInstall the Xibo CMS

Lets now install the CMS:

```
Unset

mkdir /opt/xibo
cd /opt/xibo
wget -O xibo-docker.tar.gz
https://xibosignage.com/api/downloads/cms
tar --strip-components=1 -zxvf xibo-docker.tar.gz
```

```
OR
wget
https://github.com/xibosignage/xibo-cms/releases/download/<versio
n>/xibo-docker.tar.gz
```

We now have the `docker-compose` files extracted in to `/opt/xibo`

Create config.env file

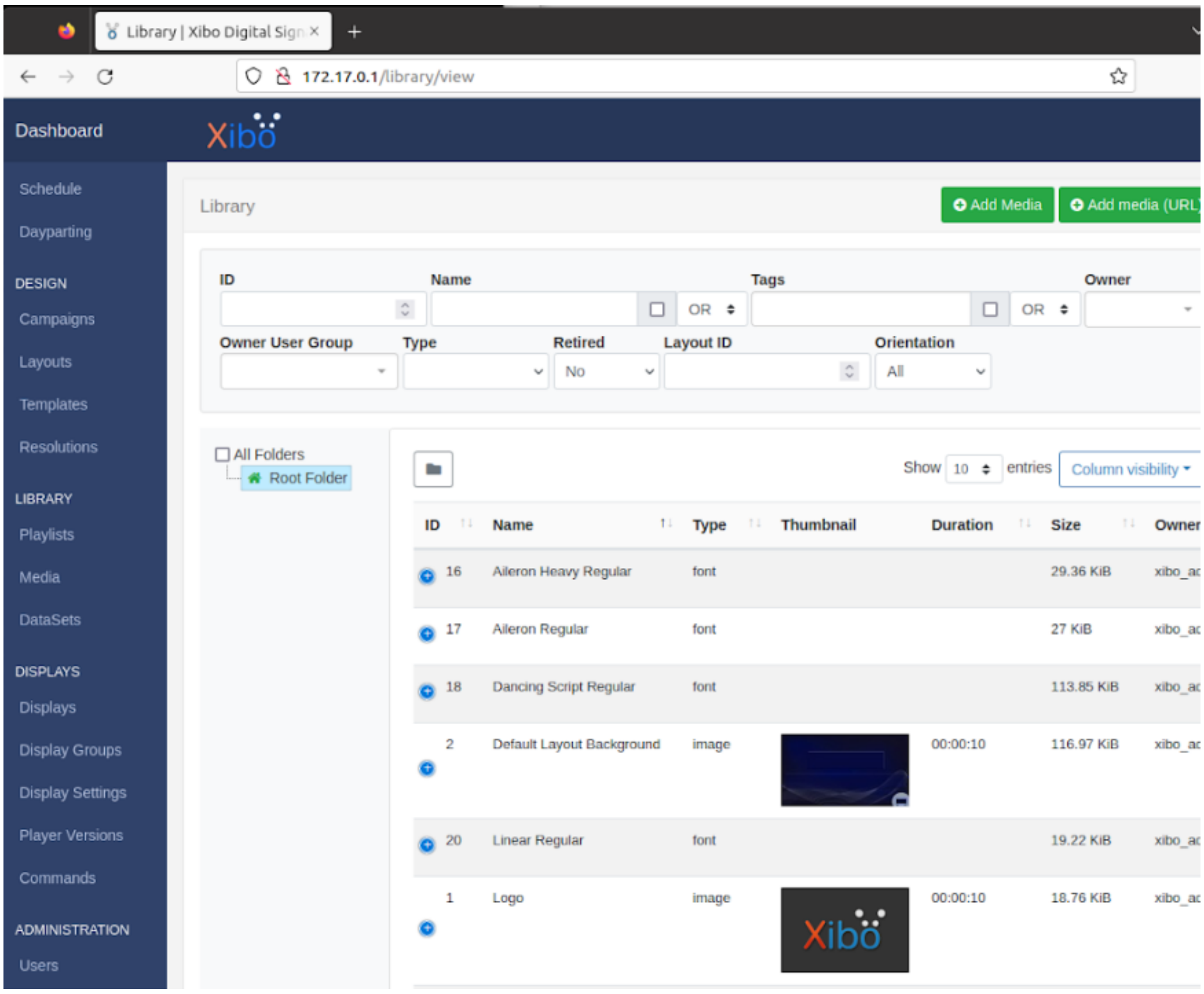
We need to create a config.env file per the install guide. Lets do that, ensuring we set a MYSQL_PASSWORD value. This must be alpha-numeric only. ie made up of A-Z a-z 0-9. No spaces, punctuation or other special characters. For example, something like `xxxSdSJSAZZKA` would work. Clearly, do not use that password!

```
Unset

cp config.env.template config.env
nano config.env
```

Save your changes and quit.

Now bring the CMS up

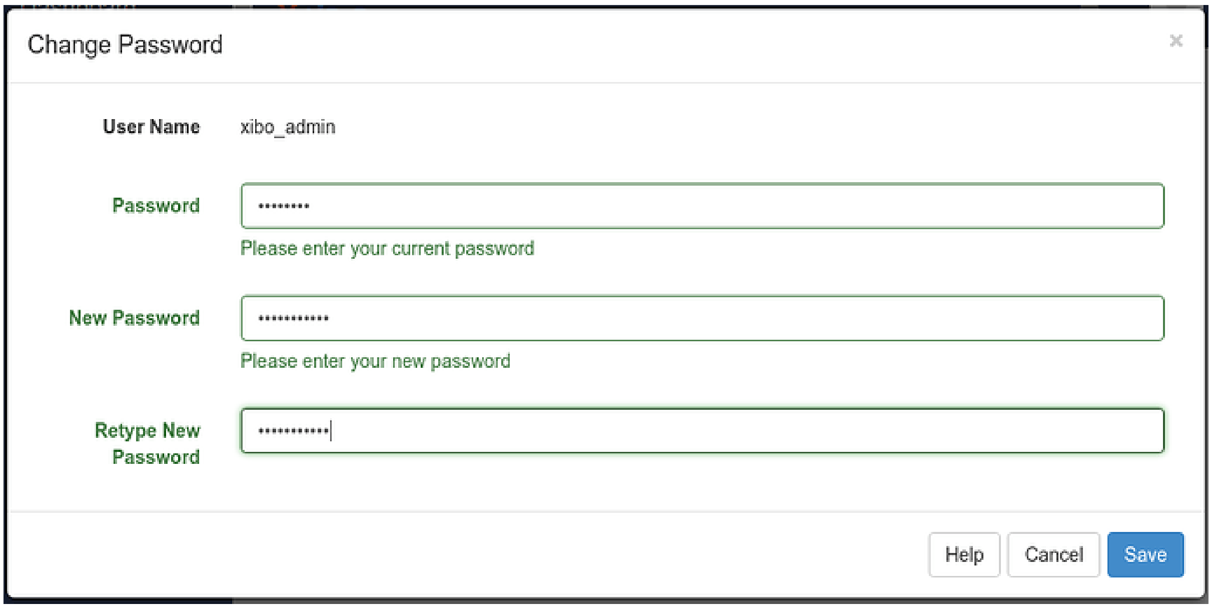
```
Unset

docker-compose up -d

check IP address for your docker using ip addr command.
Copy IP address from docker port and paste into browser.
```



ID	Name	Type	Thumbnail	Duration	Size	Owner
16	Aileron Heavy Regular	font			29.36 KiB	xibo_ad
17	Aileron Regular	font			27 KiB	xibo_ad
18	Dancing Script Regular	font			113.85 KiB	xibo_ad
2	Default Layout Background	image		00:00:10	116.97 KiB	xibo_ad
20	Linear Regular	font			19.22 KiB	xibo_ad
1	Logo	image		00:00:10	18.76 KiB	xibo_ad

ap

First thing to do is to change our xibo_admin account password:



User Name	xibo_admin
Password	••••••••
	Please enter your current password
New Password	•••••••••••
	Please enter your new password
Retype New Password	•••••••••••

Once that's changed, we're ready to use the CMS over HTTP only. Work through the CMS Post Installation Guide 33 for setup information.

You should consider setting up a firewall. As a bare minimum, the following will set you up the `ufw` firewall with the right ports open for HTTP, SSH and XMR:

```
Unset

ufw allow ssh
ufw allow 80/tcp
ufw allow 9505/tcp
ufw enable
```

Adding SSL Support

There are several ways you could add SSL support to this configuration.

The simplest is to install Apache on the host Ubuntu server, and have it proxy the SSL requests into our container.

First, we need to stop the running CMS since we'll need port 80 for our Apache server.

```
Unset

cd /opt/xibo
docker-compose down
```

Now move Xibo on to a different port number.

We'll be following the instructions to install Xibo for Docker on Linux 54 from the "Using different ports" heading.

```
Unset

cp cms_custom-ports.yml.template cms_custom-ports.yml
rm docker-compose.yml
nano cms_custom-ports.yml
```

Edit the “ports” section of the cms-xmr and cms-web services so they read as follows:

```
Unset

version: "2.1"

services:
    cms-db:
        image: mysql:5.7
        volumes:
            - "./shared/db:/var/lib/mysql:Z"
        restart: always
        environment:
            - MYSQL_DATABASE=cms
            - MYSQL_USER=cms
            - MYSQL_RANDOM_ROOT_PASSWORD=yes
        mem_limit: 1g
        env_file: config.env
    cms-xmr:
        image: ghcr.io/xibosignage/xibo-xmr:0.9
        ports:
            - "9505:9505"
        restart: always
        mem_limit: 256m
        env_file: config.env
    cms-web:
        image: ghcr.io/xibosignage/xibo-cms:release-3.3.5
        volumes:
            - "./shared/cms/custom:/var/www/cms/custom:Z"
            - "./shared/backup:/var/www/backup:Z"
            -
"./shared/cms/web/theme/custom:/var/www/cms/web/theme/custom
:Z"
            - "./shared/cms/library:/var/www/cms/library:Z"
            -
"./shared/cms/web/userscripts:/var/www/cms/web/userscripts:Z
"
            -
"./shared/cms/ca-certs:/var/www/cms/ca-certs:Z"
        restart: always
        links:
            - cms-db:mysql
            - cms-xmr:50001
        environment:
            - XMR_HOST=cms-xmr
            - CMS_USE_MEMCACHED=true
            - MEMCACHED_HOST=cms-memcached
        env_file: config.env
        ports:
            - "127.0.0.1:8080:80"
        mem_limit: 1g
    cms-memcached:
        image: memcached:alpine
        command: memcached -m 15
        restart: always
        mem_limit: 100M
    cms-quickchart:
      image: ianw/quickchart
      restart: always
```

So specifically, we changed the line:

Unset

```
        ports:
              - "65500:9505"
```

to

Unset

```
            ports:
                  - "9505:9505"
```

and

Unset

```
            ports:
                  - "65501:80"
```

to

Unset

```
            ports:
                  - "127.0.0.1:8080:80"
```

Save your changes. That will ensure that XMR runs on port 9505 as before, and the web service runs on port 8080 only on the loopback interface.

Bring the containers back up with those changes:

Unset

```
docker-compose -f cms_custom-ports.yml up -d
```

```
```

Now protect that Container with an Apache server and a LetsEncrypt SSL certificate:

Unset

```
apt install apache2
a2enmod proxy
a2enmod proxy_http
a2enmod headers
```

Edit the default apache config file to create a reverse proxy to our container:

Unset

```
nano /etc/apache2/sites-available/000-default.conf
```

It should contain

Unset

```
<VirtualHost *:80>

        ServerAdmin webmaster@localhost
        DocumentRoot /var/www/html

        ErrorLog ${APACHE_LOG_DIR}/error.log
        CustomLog ${APACHE_LOG_DIR}/access.log combined

        ProxyPreserveHost On
        RequestHeader set X-Forwarded-Proto
expr=%{REQUEST_SCHEME}

        ProxyPass / http://127.0.0.1:8080/
        ProxyPassReverse / http://127.0.0.1:8080/

</VirtualHost>
```

Save your changes, and then restart Apache

Unset

```
service apache2 restart
```

Our CMS should now be available back on port 80.

If you're using ufw, lets put a rule in for https traffic now

Unset

```
ufw allow 443/tcp
```

Then install letsencrypt (from Certbot Instructions | Certbot 4)

Unset

```
snap install core
snap refresh core
apt-get remove certbot
snap install --classic certbot
ln -s /snap/bin/certbot /usr/bin/certbot
```

And then generate a certificate (replacing `our domain name` with the DNS name for your server.

```
Unset

certbot --apache -d our address or domain name
```

Do not select the option to automatically redirect requests to https connections. Once the certificate has been issued, try accessing the CMS over https. If it works as expected, log in to the CMS and in the Settings → Network tab, tick the option to "Force HTTPS" connections.

Upgrading // BACKUP!!!

Upgrading is simple. The steps below show the steps to take to upgrade taking a full backup before hand. Run these as the root user.

```
Unset

# Stop the running container
cd /opt/xibo

# With SSL
docker-compose -f cms-custom_ports.yml stop

# Without SSL
docker-compose stop

# Backup the existing container data
cd /opt
# Delete any old backup version
rm -r xibo-backup
cp -rp xibo xibo-backup

# Download the new docker-compose files
```

```
cd /opt/xibo
wget -O xibo-docker.tar.gz
https://xibosignage.com/api/downloads/cms
tar --strip-components=1 -zxvf xibo-docker.tar.gz
```

If you didn’t enable SSL, then

Unset

```
docker-compose pull
docker-compose up -d
```

If you did enable SSL, then you’ll need to:

Unset

```
rm docker-compose.yml
cp cms_custom-ports.yml cms_custom-ports.yml.old
cp cms_custom-ports.yml.template cms_custom-ports.yml
nano cms_custom-ports.yml
```

Make the same edits to this file as in the install guide above, to specify the correct ports to use, and then run

Unset

```
docker-compose -f cms_custom-ports.yml pull
docker-compose -f cms_custom-ports.yml up -d
```

It can take several minutes for the upgrade to complete and the web server to start - particularly when going between major or minor CMS versions.

```
Unset

docker-compose [-f cms_custom-ports.yml] logs -f cms-web
```

will give you diagnostic information as to what is happening. It is normal to see an error like

```
Unset

mysqldump: Error: 'Access denied; you need (at least one of)
the PROCESS privilege(s) for this operation' when trying to
dump tablespaces
```

or

```
Unset

AH00558: httpd: Could not reliably determine the server's
fully qualified domain name, using 172.19.0.4. Set the
'ServerName' directive globally to suppress this message
```

and these can safely be ignored.

FOR SOME REASON DOCKER DOESN'T WORK

Check Docker Status: Ensure that Docker itself is running properly. You can do this by running the following command in your terminal or command prompt:
Docker ps

If Docker is not running, start it using the appropriate command for your system. For example, on Linux, you can use:
Sudo service docker start
sudo service docker

3. Navigate to Xibo Directory: Open a terminal or command prompt and navigate to the directory where your Xibo Docker installation is located. For example, if your Xibo installation is in the /opt/xibo directory, you can use:
Cd /opt/xibo
 /opt/xibo

4. Start Xibo Docker: Once you are in the Xibo directory, you can start Xibo Docker using the following command: **docker-compose up -d**

5. This command will start the Xibo containers in the background. Monitor Xibo Docker State: After executing the command, you can check the state of the Xibo Docker containers by running:
Docker-compose ps

Access Xibo Web Interface: Once the Xibo Docker containers are up and running, you should be able to access the Xibo web interface. Open a web browser and enter the URL: http://localhost. If you are running Xibo Docker on a remote server, replace localhost with the IP address or hostname of the server.