Building a Home File Server with ownCloud and Subsonic

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Greater Boston Desktop
GNU/Linux Users Group

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PRODUCTIVITY

Dropbox Accidentally Unlocked All Accounts For 4 Hours

ADAM DACHIS 21 JUNE, 2011 11:05 AM

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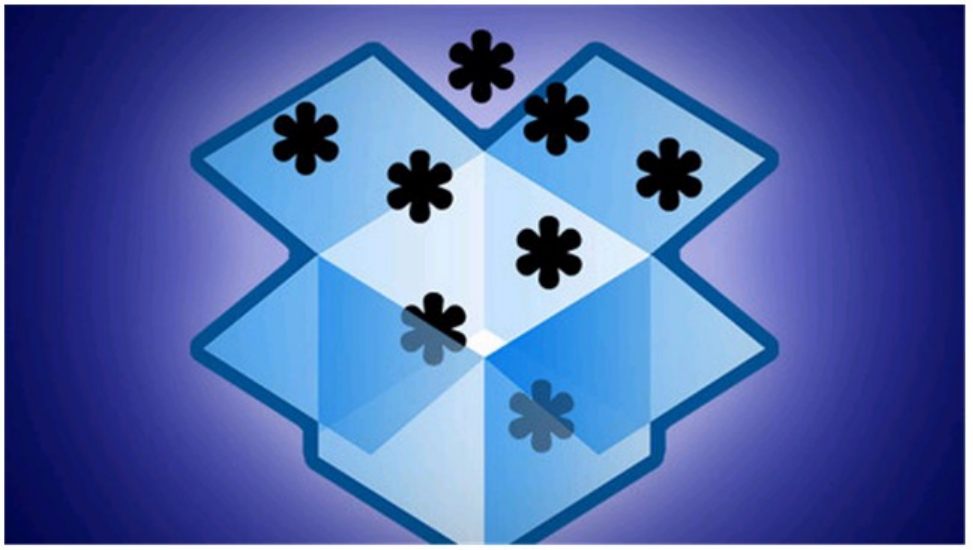

Oops! Dropbox accidentally dropped the need for password authentication this past Sunday so anyone could log into anybody else's Dropbox account with nothing but an email address.

This lasted four hours and, apparently, less than 1 per cent of users were affected, but this is just another reason why you should add an extra layer of security to the data in your Dropbox.

Dropbox Left User Accounts Unlocked for 4 Hours Sunday [Wired]

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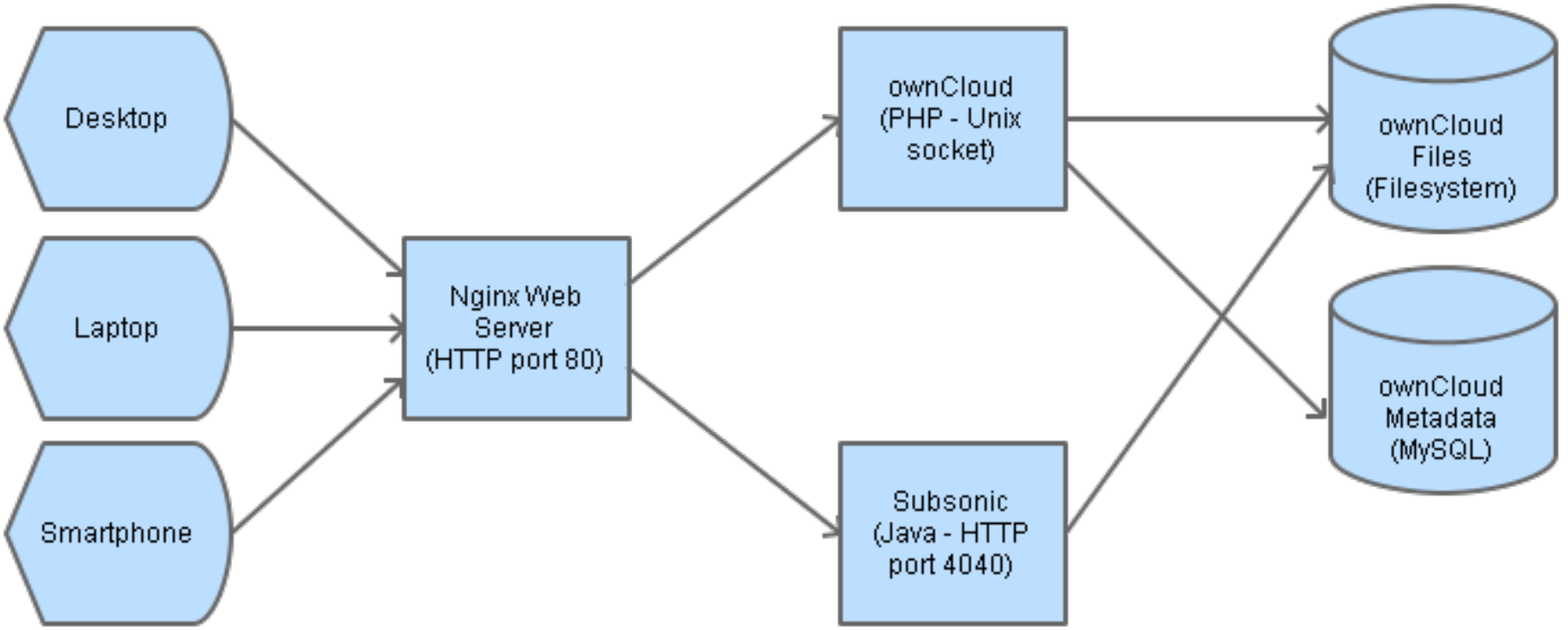
Project Overview

- Web Server for ownCloud and Subsonic apps
  - Web interface to upload, browse, and download
  - WebDAV interface
  - API for syncing
  - Web interface to your media files
    - Streaming

Project Overview



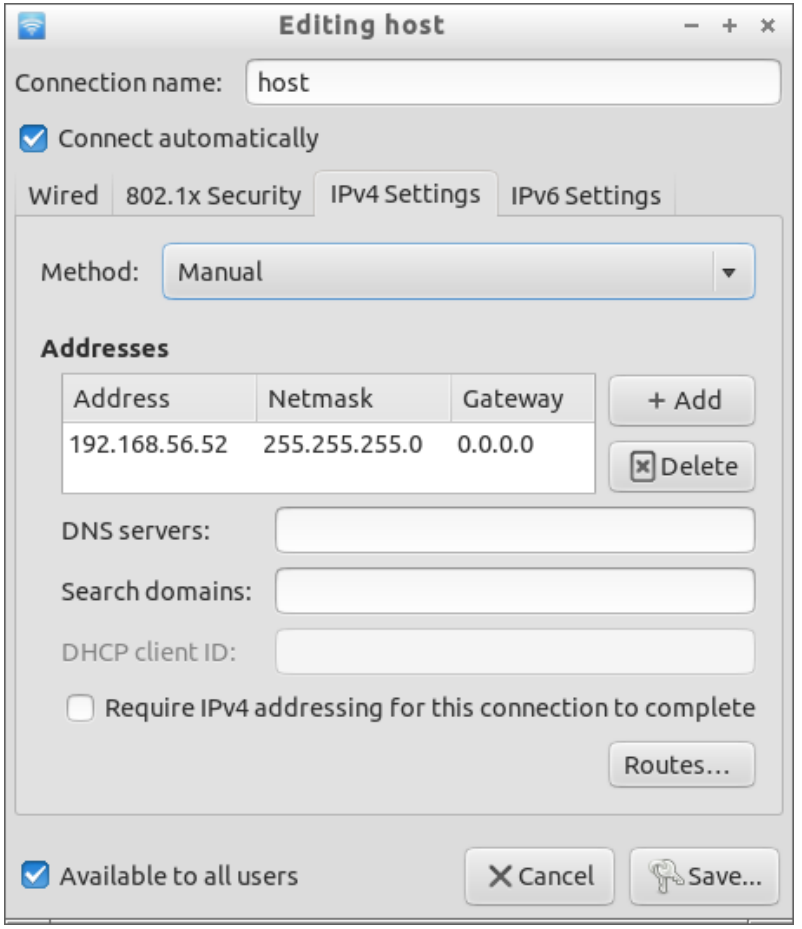
Prerequisites and Materials

- Intermediate Linux skills
  - Command line skills
  - http://ubuntuguide.org/
    http://ubuntu-manual.org/
- Spare computer or hosted server
  - 384MiB of RAM
  - Enough storage space for your file collection
- Lubuntu Linux
- Network connection
- Time

Server Config: Static IP Address

```
$ nm-tool
NetworkManager Tool
State: connected (global)
- Device: eth1  [nat]
----------------------------------------------------------------
  Type:              Wired
  Driver:            e1000
  State:             connected
  Default:           yes
  HW Address:        08:00:27:4C:DB:F3
  Capabilities:
    Carrier Detect:  yes
    Speed:           1000 Mb/s
  Wired Properties
    Carrier:         on
  IPv4 Settings:
    Address:         192.168.1.103
    Prefix:          24 (255.255.255.0)
    Gateway:         192.168.1.1
    DNS:             192.168.1.1
```

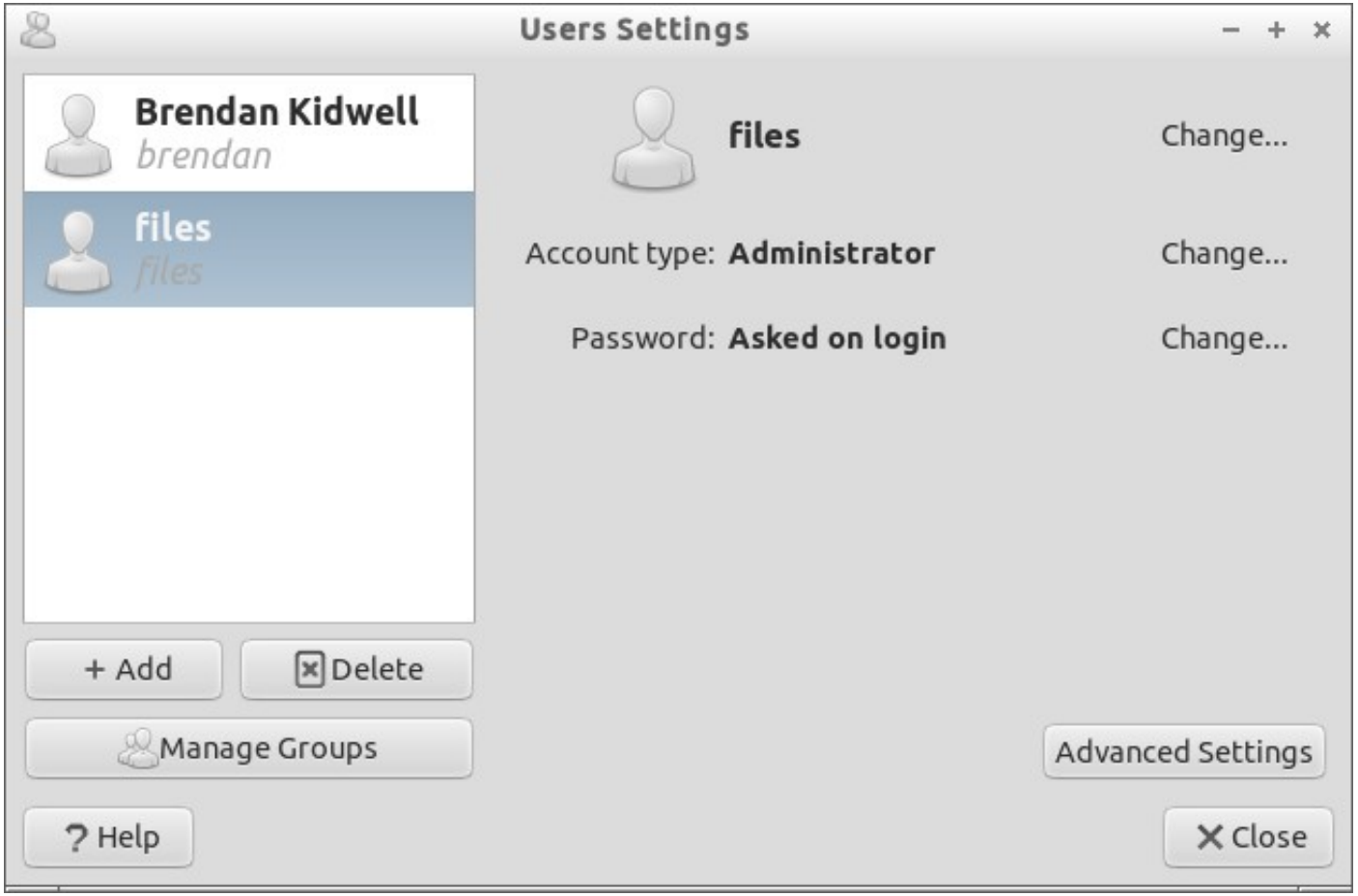
Server Config: Static IP Address



Server Config: Hostname

“/etc/hosts” on client machines:
Add
    192.168.1.50 files
to end of file.

Server Config: 'files' User Account



Server Config: SSH Server

```
$ sudo apt-get install openssh-server
```

Install Software Stacks

```
$ sudo apt-get install curl libcurl3 mysql-server nginx openjdk-6-jre \
php-apc php-xml-parser php5-cgi php5-curl php5gd php5-intl php5-mysql \
php5-mysql php5-sqlite smbclient
```

Install Software Stacks: PHP

```
$ sudo nano /etc/init/php-fastcgi-files.conf

-----
# /etc/init/php-fastcgi-files.conf
# php-fastcgi-files - starts php-cgi as an external FASTCGI process
description "php-fastcgi-files - keep up php-fastcgi"
start on runlevel [2345]
stop on runlevel [!2345]
respawn
exec /usr/bin/sudo -u files PHP_FCGI_CHILDREN=5 PHP_FCGI_MAX_REQUESTS=125
↳ /usr/bin/php-cgi -q -b /tmp/php-fastcgi-files.socket
-----

$ sudo service php-fastcgi-files start
php-fastcgi-files start/running, process 10098
```

Install Software Stacks: Nginx

```
$ sudo nano /etc/nginx/sites-available/default

Add at top of file:
-----
upstream phpfiles {
  server unix:/tmp/php-fastcgi-files.socket;
}
-----

Add at the end of “server” block:
-----
  include apps/*.conf;
-----
```

Install Software Stacks: phpMyAdmin

```
$ sudo mkdir /etc/nginx/apps
$ sudo nano /etc/nginx/apps/phpmyadmin.conf

-----
rewrite ^/phpmyadmin$ /phpmyadmin/ permanent;
location /phpmyadmin/ {
  alias /home/files/Apps/phpmyadmin/;
  index index.php;
}
location ~ ^/phpmyadmin/(.*\.php)$ {
  root /home/files/Apps;
  fastcgi_intercept_errors on;
  fastcgi_param SCRIPT_FILENAME
$document_root$fastcgi_script_name;
  fastcgi_pass phpfiles;
  include fastcgi_params;
}
-----

$ sudo service nginx restart
Restarting nginx: nginx.
```

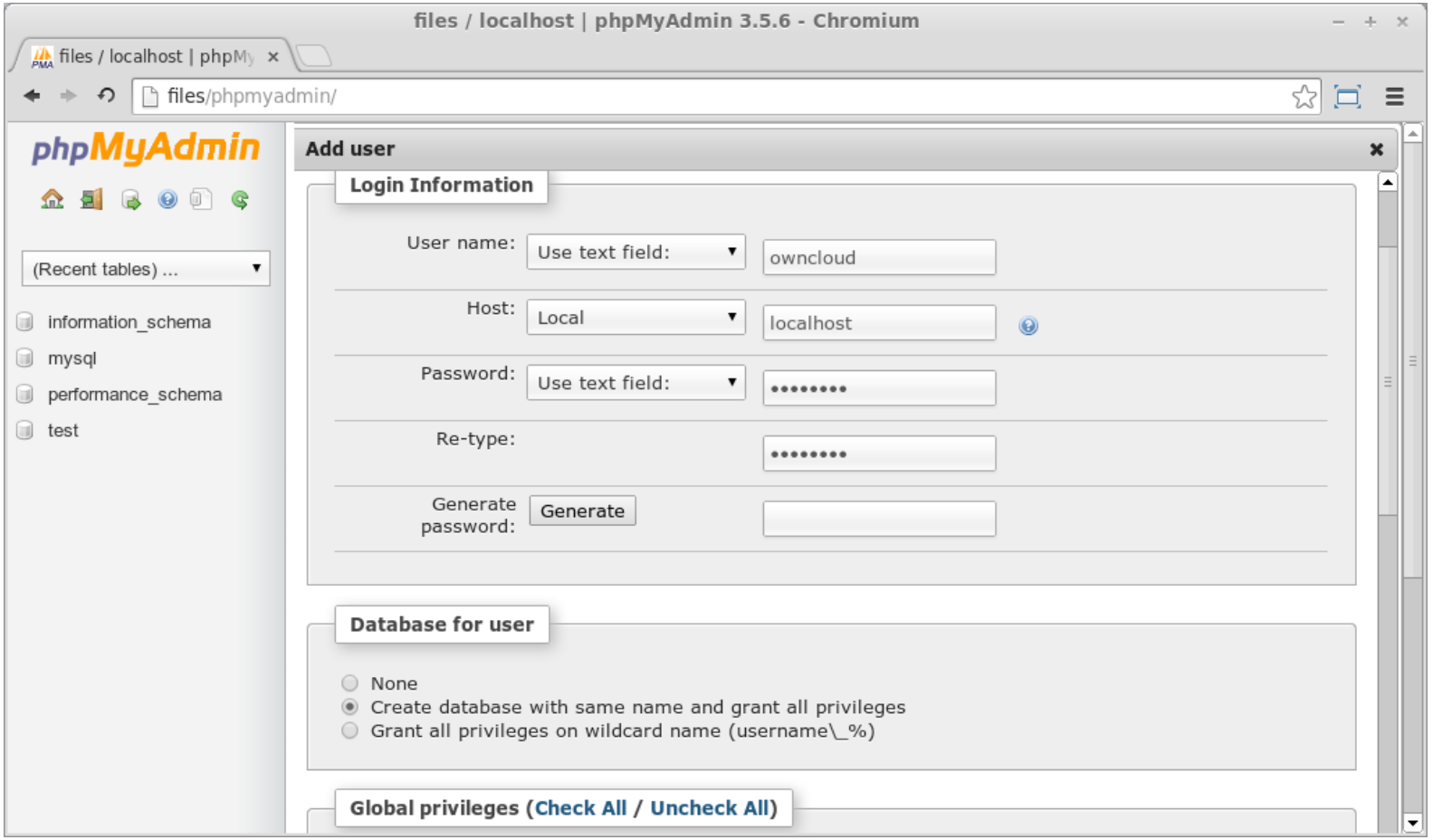
Installing ownCloud

```
$ sudo nano /etc/php5/cgi/php.ini

… Change post_max_size and upload_max_size to 2000M

$ sudo service php-fastcgi-files restart
php-fastcgi-files stop/waiting
php-fastcgi-files start/running, process 13128
```

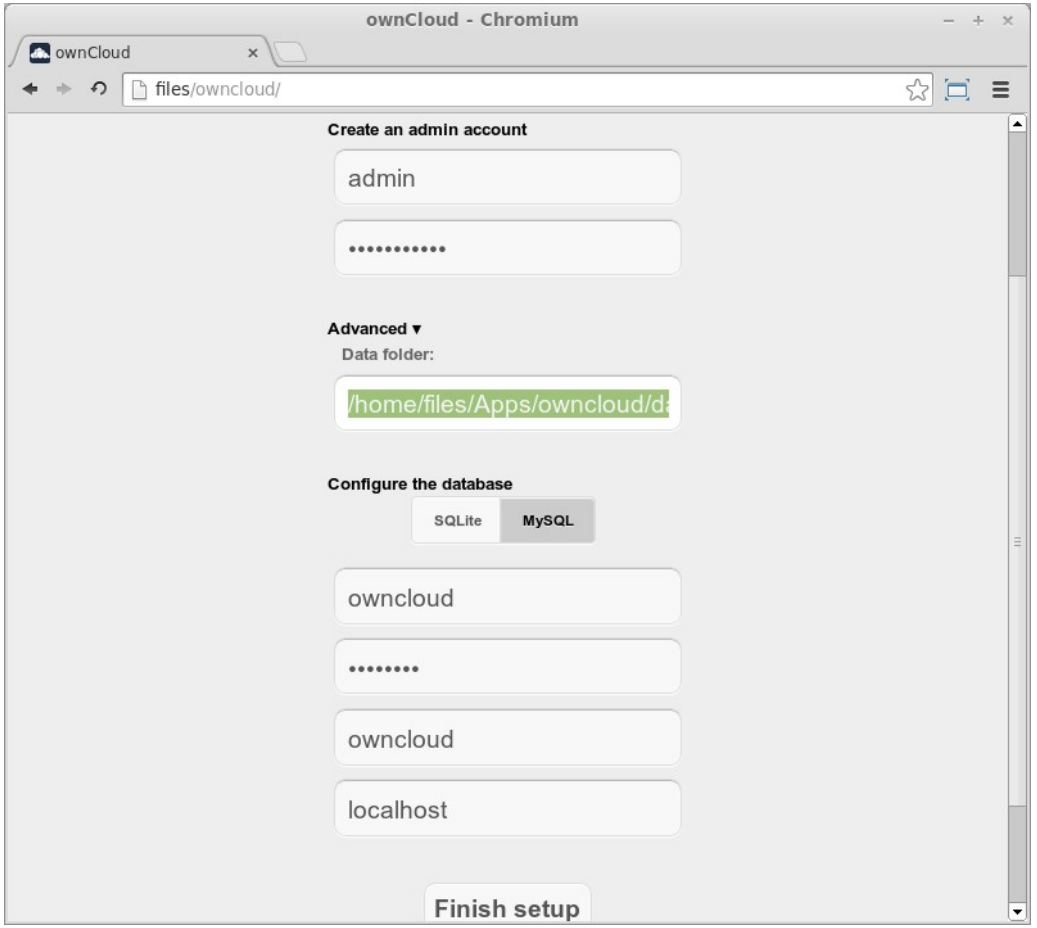
Installing ownCloud

```
$ sudo nano /etc/nginx/apps/owncloud.conf

-----
client_max_body_size 2000M;
rewrite ^/owncloud$ /owncloud/ permanent;
location /owncloud/ {
  alias /home/files/Apps/owncloud/;
  index index.php;
  try_files $uri $uri/ @owncloudwebdav;
}
location @owncloudwebdav {
  root /home/files/Apps;
  fastcgi_split_path_info ^(.+\.php)(/.*)$;
  fastcgi_pass phpfiles;
  fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
  include fastcgi_params;
}
location ~ ^/owncloud/(.*\.php)$ {
  root /home/files/Apps;
  fastcgi_intercept_errors on;
  fastcgi_param SCRIPT_FILENAME $document_root$fastcgi_script_name;
  fastcgi_pass phpfiles;
  include fastcgi_params;
}
location ~ ^/owncloud/(data|config|\.ht|db_structure\.xml|README) {
  deny all;
}
-----

$ sudo service nginx restart
Restarting nginx: nginx.
```

Installing ownCloud



Installing ownCloud



www.glump.net/howto/home_file_server

Brendan Kidwell

Installing Subsonic

```
$ sudo dpkg -i subsonic-4.7.deb
. . .
$ sudo nano /etc/default/subsonic

-----
SUBSONIC_USER=files
-----

$ sudo mkdir -p /var/subsonic
$ sudo chown -R files.files /var/subsonic
$ sudo nano /usr/share/subsonic/subsonic.sh

Change “SUBSONIC_CONTEXT_PATH” to the value “/subsonic”.

$ sudo service subsonic restart
 * Restarting Subsonic Daemon subsonic
Started Subsonic [PID 14178, /var/subsonic/subsonic_sh.log]
   ...done.
```

Installing Subsonic

```
$ sudo nano /etc/nginx/apps/subsonic.conf

-----
rewrite ^/subsonic$ /subsonic/ permanent;
location /subsonic/ {
  proxy_pass http://localhost:4040;
  proxy_set_header X-Real-IP $remote_addr;
  proxy_set_header X-Forwarded-For $proxy_add_x_forwarded_for;
  proxy_set_header Host $http_host;
}
-----

$ sudo service nginx restart
Restarting nginx: nginx.
```

Using ownCloud and Subsonic

(Demo)

Advanced Configuration

- Access from Outside your Local Network
  - Setup port forwarding on your home router
  - If using DD-WRT firmware, http://www.dd-wrt.com/wiki/index.php/Port_Forwarding
- Internet Hostname
  - http://dyn.com
    DynDNS is $20/year
- Encrypting Trafffic with TLS
  - Get a free SSL certificate at http://www.startssl.com/ .