ownCloud 8 and DigitalOcean

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The following slides are based off the notes that I used to build ownCloud 8, on a server running CentOS 7 at DigitalOcean for the March 2015 meeting of the Bluegrass Linux User Group.

The notes assume that you know how to build a droplet at DigitalOcean, but if not there are links at the end of the presentation.

Where I felt it necessary I have included links in the notes to other technologies and again at the end.

This document is not complete. Please feel free to add, offer corrections or expand upon.

Server Build

Droplet at DigitalOcean:

- Login and create your droplet.
- Record the servers IP address.

Database:

- Database name.
- Username.
- Password.

ownCloud:

- Administrative account and password.
- Password to unencrypt files for use in an emergency

Install Software and SELinux

Our server has been built and now to add the required software to ownCloud:

- yum install httpd php php-mysql mariadb-server mariadb sqlitephp-dom php-mbstring php-gd php-pdo wget vim mod_ssl nmap mlocate

Configure SELinux

- vim /etc/selinux/config
  - (enable) I know most articles tell you to disable. (stopdisablingselinux.com)
- shutdown -r now
- updatedb&
  - Not required but I use the locate command.**
- getenforce
- setsebool -P httpd_unified 1
  - http://wiki.centos.org/TipsAndTricks/SelinuxBooleans

Setup Firewall

Setup the firewall:

- systemctl enable firewalld
- systemctl start firewalld
- systemctl status firewalld
- firewall-cmd --permanent --zone=public –add-service=ssh
- firewall-cmd --permanent --zone=public –add-service=http
- firewall-cmd --permanent --zone=public –add-service=https
- firewall-cmd --reload

Self Signed Certificate

Setup self signed SSL. Borrowed heavily from an article at DigitalOcean: http://bit.ly/1Ekadxh ;)

- mkdir /etc/httpd/ssl
- openssl req -x509 -nodes -days 365 -newkey rsa:2048 -keyout /etc/httpd/ssl/apache.key -out /etc/httpd/ssl/apache.crt
- vim /etc/httpd/conf.d/ssl.conf
  - Find #DocumentRoot "/var/www/html" and uncomment.
  - Set servername. Example: ServerName x.x.x.x:443 (Tonight we are using the IP address.)

Find the SSLCertificateFile and SSLCertificateKeyFile and change.

- vim /etc/httpd/conf.d/ssl.conf

SSLCertificateFile /etc/httpd/ssl/apache.crt
SSLCertificateKeyFile /etc/httpd/ssl/apache.key

Restart the Apache Webserver.

- systemctl restart httpd.service
- systemctl status httpd.service

Apache and Database Setup

Continue to work on Apache and start Mariadb.

Backup the main configuration file and then remove the comments.

- cp /etc/httpd/conf/httpd.conf .
- sed -i '/^[[:blank:]]*#/d;s/#.*//' /etc/httpd/conf/httpd.conf
- sed -i '/^\s*$/d' /etc/httpd/conf/httpd.conf

Fix .htaccess parsing for ownCloud.

- vim /etc/httpd/conf/httpd.conf

Change AllowOverride None to AllowOverride All *AllowOverride controls what directives may be placed in .htaccess files.

<Directory "/var/www/html"> If not done this causes an issue with Owncloud.

Restart the webserver, start the database server and then enable both.

- systemctl start httpd.service
- systemctl start mariadb.service
- systemctl enable httpd.service
- systemctl enable mariadb.service

Database Setup

Continue the database installation.

- mysql_secure_installation
  - (Yes to all!)
  - Root password - myt3st0C#1

Access DB from CLI

- mysql -u root -p (myt3st0C#1)

SQL Commands to create the database

- Create database clouddb;
- grant all on clouddb.* to 'clouddbuser'@'localhost' identified by 'Ist1h1s0k?'; ** What did we do here?
- exit;

Change DB server not to listen on public IP address.

- vim /etc/my.cnf
  - bind-address = 127.0.0.1

Restart the DB

- systemctl restart mariadb.service
- systemctl status mariadb.service

Install ownCloud

Work on ownCloud install:

(Owncloud: Fix php.ini: This can cause major issues with non-ASCII characters in file names.)

- vim /etc/php.ini
  - Find default_charset and change to UTF-8

Add the repo from:

http://software.opensuse.org/download/package?project=isv:ownCloud:community&package=owncloud

- cd /etc/yum.repos.d/
- wget http://download.opensuse.org/repositories/isv:ownCloud:community/CentOS_CentOS-7/isv:ownCloud:community.repo
- yum install owncloud

Finish SELinux Setup

Setup SELinux and Apache for Owncloud.

- semanage fcontext -a -t httpd_sys_rw_content_t /var/www/html/owncloud/data
- restorecon /var/www/html/owncloud/data
- semanage fcontext -a -t httpd_sys_rw_content_t /var/www/html/owncloud/config
- restorecon /var/www/html/owncloud/config
- semanage fcontext -a -t httpd_sys_rw_content_t /var/www/html/owncloud/apps
- restorecon /var/www/html/owncloud/apps
- systemctl restart httpd.service

Access ownCloud

Now to access our server!

Example:

https://*.*.*.*/owncloud

Setup our ownCloud instnace.

Admin user:

- Create admin user

Which Database:

- Connect to which DB

Database information:

- DB clouddbuser (DB user name)
- DB Ist1h1s0k? (DB password)
- DB clouddb (DB Name)
- localhost (DB listening port)

Post Installation

By default ownCloud does not have encryption enabled. Let us enable encryption!

- Go to apps and enable encryption.
- Go back to admin logout.
- Log back in to encrypt files.
- Go to admin page to setup recovery key.

Adding Apps to ownCloud

OwnCloud does have add on apps.

https://apps.owncloud.com/

App installation is fairly straight forward.

Download zip file, scp to server and unzip into the following directory.

/var/www/html/owncloud/apps/

ls -ltra /var/www/html/owncloud/apps/

Check the Apps section of ownCloud and the new app should be available or log out and back in.

References

ownCloud:

ownCloud Server 8 Features

Admin Manual

How ownCloud Encrypts your data

ownCloud SELinux setup

SELinux:

CentOS Howto / Tips and Tricks

SELinux Project Page

Wiki Page

Digital Ocean:

Getting Started with DigitalOcean

Create an SSL Certificate at DigitalOcean