FAMP

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│                                                │
│        Welcome to FreeBSD!                     │
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│     1. Boot FreeBSD [default]                  │
│     2. Boot FreeBSD with ACPI disabled         │
│     3. Boot FreeBSD in Safe Mode               │
│     4. Boot FreeBSD in single user mode        │
│     5. Boot FreeBSD with verbose logging       │
│     6. Escape to loader prompt                 │
│     7. Reboot                                  │
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│     Select option, [Enter] for default         │
│     or [Space] to pause timer  8               │
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Apache2.4, MySQL5.7, PHP8.0 on FreeBSD 12.3, 13.0 or 13.1 (FAMP) plus Cacti Server

update: October 18, 2022 femtopc.com

Synopsys: Most Web content is driven by an Apache Web Server with PHP language and MySQL database server. This document is a supplement to FemtoPC's "Cacti" installation script file for FreeBSD 12.3, 13.0 or 13.1. At writing time, Cacti version was 1.2.19 and PHP pre-requisite was 8.0.

https://www.femtopc.com/shell_scripts/FAMP/Cacti/

Requirements:

1. FreeBSD server, on discrete hardware or running in a virtual machine.

2. Script designed for server with clean FreeBSD install, no other software installed.

3. Disk requirement: After installation, <3GB are used, including the vanilla FreeBSD installation.

4. Must be run with 'root' access, or as a user that "su -" to root.

5. Server must have Internet access.

6. Script file must run in /root directory.

7. Depending on Internet speed and server processing power, installation is complete in under 15 minutes.

Step-by-step:

1. Login to FreeBSD server as root, or su - to root.

2. Fetch the FAMP package

```
fetch https://www.femtopc.com/shell_scripts/FAMP/Cacti/install.gz
```

3. Unzip the download

```
tar -xf install.gz
```

4. Run the shell program and answer when prompted.

```
./cacti.sh
```

5. Script will check to make sure you are running as root, in the /root directory and have Internet access. It will then check for any Apache, MySQL and PHP packages and exit if found. After packages are installed, the configuration will be automatically done. A password will be requested for MySQL root user. This is a MUST. Please make it secure. View the logfile.log to troubleshoot any errors.

Then Cacti will be installed and setup.

Here is a breakdown of the commands that are run in the script.

install Apache2.4

pkg install -y apache24

install MySQL57-Server

pkg install -y mysql57-server

install PHP80

pkg install -y php80

install PHP80-extentions

pkg install -y php80-extensions

install extra extensions for Cacti

pkg install -y php80-gd

pkg install -y php80-gettext

pkg install -y php80-gmp

pkg install -y php80-ldap

pkg install -y php80-mbstring

pkg install -y php80pdo_mysql

pkg install -y php80-snmp

pkg install -y php80-sockets

pkg install -y php80-sodium

pkg install -y php80-zlib

install Apache mod_php80

pkg install -y mod_php80

These are what the configuration routines do

modify the /usr/local/etc/apache24/httpd.conf file

make a backup and then edit

cd /usr/local/etc/apache24

cp httpd.conf httpd.conf.original

ee httpd.conf

set the ServerAdmin, in the script it is set to root. You may also set a webmaster email here.

set the ServerName to the IP address of server. A domain name could be set here if available.

set the second time AllowOverride None, where None is capital "N" to All. This will allow .htaccess files to work.

set DirectoryIndex from just index.html to index.php index.htm index.html to capture PHP files

setup Apache to run PHP by creating an Includes/php.conf file

cd Includes

echo "<FilesMatch \"\\.php$\">" > php.conf

echo "SetHandler application/x-httpd-php" >> php.conf

echo "</FilesMatch>" >> php.conf

echo "<FilesMatch \"\\.phps$\">" >> php.conf

echo "SetHandler application/x-httpd-php-source" >> php.conf

echo "</FilesMatch>" >> php.conf

return to our root directory

cd /root

Make Apache start automatically when FreeBSD boots

sysrc apache24_enable="yes"

Startup the Apache Server

service apache24 start

```
# Setup to run MySQL server

# Make Server start automatically when FreeBSD boots.

sysrc mysql_enable="yes"

# start the mysql server for the first time

service mysql-server start

# the secret password set for the MySQL root user is in the .mysql_secret file

# display the root password

cat ./mysql_secret

# use that password to change the root to your own password

# put the secret password in {secret password}, no brackets and make sure to place your new password
in single quotes.

/usr/local/bin/mysqladmin -u root -p{secret password} password 'your password'

# Now configure PHP

cd /usr/local/etc

# choose a development or a production environment

# development (displays errors in web pages, good for troubleshooting)

cp php.ini-development php.ini

# or production (will not display web page errors)

cp php.ini-production php.ini

# edit the php.ini file

ee php.ini

# find where memory_limit = 128M and increase to 1024M

# find where post_max_size = 8M and set to 32 (set your limit here)

# find where upload_max_filesize = 2M and set to 1G (or your limit here)

# find where max_file_uploads = 20 and increase to 80

# lastly, find ;date.timezone and uncomment (delete ;) and enter timezone (IMPORTANT!!)

# hint: find your server's setting by doing "cat /var/db/zoneinfo"

# after changes to php.ini, Apache must restart

service apache24 restart

# at this point you have a working FAMP server

cd /root
```

```
# Install Cacti and Spine

pkg install -y cacti

pkg install -y spine

chmod +s /usr/local/bin/spine

#Set timezone in mysql database, important

mysql_tzinfo_to_sql /usr/share/zoneinfo | mysql -u root -p mysql

# use your MySQL root password

#Create Cacti database

cd /usr/local/share/cacti

mysql -u root -p ←enter your root password here

mysql> create database cacti;

mysql> alter database cacti character set utf8mb4;

mysql> alter database cacti collate utf8mb4_unicode_ci;

mysql> exit

#Import the Cacti database schema

mysql -u root -p cacti < cacti.sql

#Configure Cacti to access the database

cd include

cp config.php.sample config.php

ee config.php

#correct username/password and add timezone set

$database_type = "mysql";

$database_default = "cacti";

$database_hostname = "localhost";

$database_username = "root";

$database_password = "root";  ← your MySQL root password

date_default_timezone_set('Asia/Taipei'); ← timezone

# hint: cat /var/db/zoneinfo to find your timezone set
```

#Setup the poller cron to act every 5 minutes)

cd /root

crontab -e

#this will be vi, so use "i" to insert, then paste the following

*/5 * * * * /usr/local/bin/php /usr/local/share/cacti/poller.php &>/dev/null

#ESC, colon ":" wq! will write and quit

#restart the daemon to take affect

service cron restart

#setup spine

ee /usr/local/etc/spine.conf

DB_Host   localhost

DB_Database   cacti

DB_User   root

DB_Pass   root ← your MySQL root password

DB_Port   3306

#tuning mysql

ee /usr/local/etc/mysql/my.cnf

#Under [mysqld] increase these two parameters

innodb_write_io_threads   = 16

innodb_read_io_threads   = 32

#after 'skip-symbolic-links' add the following

character_set_server   = utf8mb4

collation_server   = utf8mb4_unicode_ci

innodb_io_capacity   = 5000

innodb_io_capacity_max   = 10000

innodb_flush_log_at_timeout   = 3

#save

#make log and correct permissions

cd /usr/local/share/cacti

mkdir log

chown -R www:cacti cache && chown -R www:cacti include && chown -R www:cacti log && chown -R www:cacti resource && chown -R www:cacti scripts

#more owner permissions

chown -R www:cacti /var/db/cacti

chown -R www:cacti /var/log/cacti

restart all services

service apache24 restart

service mysql-server restart

#This completes the FAMP server and Cacti initial install. View the default web page at:

http://your_server_ip_address/ or the PHP status at http://your_server_ip/phpinfo.php

Enter Cacti web configuration at: http://your_server_ip_address/cacti

Default username/password are admin/admin.

First task is to change the default password. Enter admin as old password and new one twice.

IMPORTANT!! Cacti requires a password change with at least 8 characters, one lower, one upper and one special character.

Continue with the web-based install of Cacti. Pre-requisites and permissions should be correct.