

Installing and configuring Apache Web Server with MySQL, SSL, PHP and more !

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1.1. Why this paper

As a web server administrator I realized that there is a lot of help available on the Internet to help set up a webserver, but it is all scattered and I am trying to get all listed in one paper. I do not claim to cover everything but will try to address as much issues as possible and will keep upgrading as I proceed with my own webserver at test.

1.2. Platform

There are numerous choices out there. I choose RedHat Linux because of the great support and also because it is so much out there that you could find numerous mailing lists and answers in search engines to almost everything. One of the BSD's would be a good choice too, but the software RAID setup process booted me off from that. I have tested all this on RedHat Linux 8.0.

1.3. Recommendations

I further recommend going through online documentations of the software and services we are going to install for the webserver.

1.4. Disclaimer

No guarantees or claims whatsoever. If you find an error please notify me at araheja@agftech.com. I will do my best to test and rectify and after resolving the problem list you support-list which will show up when I start rectifying problems as pointed out by others.

1.5. Copyright

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2. Requirements

- 2.1. [The hardware](#)
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2.1. The hardware

I have used a high end server, because it was a commercial requirement. It is a Pentium 4, 2.5 GHz
1GB DDR RAM
RAID-5 on SCSI HDD
Adaptec RAID controller card

This server really screams. It's fast and reliable.
On the other hand if you are installing a server just for fun or learning purpose, RedHat Linux (actually, almost all Linux and BSD flavors) will let you use one of your 3 year old machines as well and still run smooth enough to host yourself.

2.2. The software

When I installed I chose not to install any of the services I finally need because newer versions are out there with a lot of security fixes already done, thus saving me time from applying security patches.
I have installed the following software and services. You might need a few or all of them. If you experience something different when doing these steps, do email me at araheja@agftech.com and we'll try to find a solution and I would also post the same here for future references.

2.3. The basics

The reader is expected to be familiar with rpm, tar, gzip and other basic UNIX commands and utilities.

2.4. The downloads

Download the following packages and follow the instructions in [Installation](#).

MySQL www.mysql.com (binary tar.gz, not source)

openssl www.openssl.org (source tar.gz)

mod_ssl www.modssl.org (source tar.gz, must match apache version below)

apache www.apache.org (source tar.gz) - get the 1.3.27 (as of now - 07/02/2003 - PHP isn't stable on Apache 2)

curl curl.haxx.se (source tar.gz)

php www.php.net (source tar.gz)

mod_perl perl.apache.org (source tar.gz)

3. Installation

I put all software in one folder /webserver_soft. Go to the source folder and unzip and untar all the downloads

```
cd /webserver_soft
```

```
tar -zxvf mysql-4.0.12.tar.gz
tar -zxvf openssl-0.9.7b.tar.gz
tar -zxvf mod_ssl-2.8.14-1.3.27.tar.gz
tar -zxvf apache_1.3.27.tar.gz
tar -zxvf curl-7.10.5.tar.gz
tar -zxvf php-4.3.2.tar.gz
tar -zxvf mod_perl-1.0-current.tar.gz
```

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3.1. Installing MySQL

```
tar -zxvf /usr/local/src/mysql-4.0.12.tar.gz
cp -R mysql-4.0.12 mysql
rm -Rf mysql-4.0.12
groupadd mysql
useradd -g mysql mysql
cd mysql
scripts/mysql_install_db
chown -R root /usr/local/mysql
chown -R mysql /usr/local/mysql/data
chgrp -R mysql /usr/local/mysql
chown -R root /usr/local/mysql/bin
cp /usr/local/mysql/support-files/mysql.server /etc/rc.d/init.d
chmod 0755 /etc/rc.d/init.d/mysql.server
```

Testing the installation

```
/etc/rc.d/init.d/mysql.server start
/usr/local/mysql/bin/mysql
mysql> quit
/etc/rc.d/init.d/mysql.server stop
```

The alternative to this installation is to download RPM's of mysql and installing them

```
rpm -i MySQL-shared-4.0.12-0.i386.rpm
rpm -i MySQL-devel-4.0.12-0.i386.rpm
rpm -i MySQL-server-4.0.12-0.i386.rpm
rpm - MySQL-client-4.0.12-0.i386.rpm
```

In either case, after installation make sure to create the root password for the mysql server

```
# mysqladmin -u root password 'your-new-password'
```

3.2. Installing OpenSSL

```
cd /webserver_soft/openssl-0.9.7b
./config
make
make install
```

3.3. Installing mod_ssl

```
cd /usr/local/src/mod_ssl-2.8.14-1.3.27
./configure --with-apache=/usr/local/src/apache_1.3.27 \
--with-ssl=/usr/local/src/openssl-0.907b \
--prefix=/usr/local/apache \
--enable-module=ssl \
--enable-module=all \
--enable-shared=max \
--enable-rule=EAPI
```

3.4. Installing apache

Why am I using Apache 1.3.27 when Apache 2.0.46 is out there?

The reason can be located at <http://www.php.net/manual/en/install.apache2.php> as on August 1, 2003, which warns saying “**Do not use Apache 2.0 and PHP in a production environment neither on Unix nor on Windows.**”

```
cd /webserver_soft/apache_1.3.27
make
make certificate (answer questions and select no for encrypting private key with
passphrase)
make install
```

3.5. Installing Curl

```
cd /webserver_soft/curl-7.10.5
./configure --with-ssl
make
make install
```

3.6. Installing PHP

Be careful and make sure you need all these options

```
cd /webserver_soft/php-4.3.2
./configure --with-apxs=/usr/local/apache/bin/apxs \
--with-config-file-path=/usr/local/apache/conf \
--with-mysql=/usr/local/mysql \
--with-curl \
--enable-trans-sid \
--enable-debug=no \
--enable-track-vars
```

If you have pre-installed or rpm installed MySQL then, you might do

```
--with-mysql=/usr/ \ instead of --with-mysql=/usr/local/mysql \ on line 3 of configure
command, because that's where the libraries are otherwise you might get an error saying
"Cannot find header files under /usr/local/mysql"
```

```
make
make install
```

```
ln -s /usr/local/lib/libcurl.so.2 /usr/lib/libcurl.so.2
cp /webserver_soft/php-4.3.2/php.ini-dist /usr/local/apache/conf/php.ini
```

3.7. Installing mod_perl

```
cd /webserver_soft/mod_perl-1.27
perl Makefile.PL USE_APXS=1 WITH_APXS=/usr/local/apache/bin/apxs
EVERYTHING=1
make
make install
```

4. Apache Configuration

- 4.1. [Configure PHP on Apache](#)
- 4.2. [Configure ssl on Apache](#)
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4.1. Configure PHP on Apache

```
LoadModule php4_module libexec/libphp4.so
LoadModule perl_module libexec/libperl.so
AddModule mod_php4.c
AddType application/x-httpd-php .php
```

4.2. Configure ssl on Apache

```
<IfDefine SSL>
LoadModule ssl_module libexec/libssl.so
</IfDefine>
```

```
<IfDefine SSL>
AddModule mod_ssl.c
</IfDefine>
```

4.3. Configure mod_perl on Apache

```
AddModule mod_perl.c
```

4.4. Test Apache

```
/usr/local/apache/bin/apachectl startssl
/usr/local/apache/bin/apachectl stop
```

BI NGO !!!