

Apache HTTP Server

Administrator's Guide

Release 5.0

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Preface

The Apache HTTP Server Project is a collaborative software development effort aimed at creating a robust, commercial-grade, featureful, and freely-available source code implementation of an HTTP (Web) server. The project is jointly managed by a group of volunteers located around the world, using the Internet and the Web to communicate, plan, and develop the server and its related documentation. This project is part of the Apache Software Foundation. In addition, hundreds of users have contributed ideas, code, and documentation to the project. This file is intended to briefly describe the history of the Apache HTTP Server and recognize the many contributors. PostgreSQL, the highly scalable, SQL compliant, open source object-relational database management system.

The Apache web site [<http://httpd.apache.org>] carries details on the latest release and other information to make your work or play with PostgreSQL more productive. And The mailing lists are a good place to have your questions answered, to share experiences with other users, and to contact the developers.

1

Installation

1.1. Download and Build

Download and save Apache source archive from <http://httpd.apache.org> We use mod_deflate to support HTTP gzip compression. And mod_mem_cache to support caching of file descriptors.

```
cd /usr/local/src
md5sum -cv httpd-2.XX.YY.tar.gz.md5
#md5sum must be print OK
http-2.XX.YY.tar.gz OK
rm http-2.XX.YY.tar.gz
cd http-2.XX.YY
```

For Java Front Server use MPM worker :

```
./configure --prefix=/usr/local/apache-2.2.3 --with-mpm=worker --enable-ssl --enable-rewrite --enable-use
```

For PHP Front Server use MPM pre-fork (PHP doesn't support worker) :

```
./configure --prefix=/usr/local/apache-2.2.3 --with-mpm=prefork --enable-ssl --enable-rewrite --enable-use
```

Compile and install :

```
make
make install
```

1.2. Install

Install binaries and create required user and directories.

```
ln -s /usr/local/apache-2.XX.YY /usr/local/apache
mkdir /var/log/apache
mkdir /etc/apache
mv /usr/local/apache/conf /etc/apache/
ln -s /etc/apache/conf /usr/local/apache/conf
mkdir -p /usr/lib/apache
mv /usr/local/apache/modules /usr/lib/apache
ln -s /usr/lib/apache/modules /usr/local/apache/modules
groupadd -g 2100 wwwgroup
useradd -d /srv/www -g wwwgroup -u 2101 -m -s /bin/true apache
```

Edit and replace token in /etc/apache/conf/httpd.conf

```
ServerRoot "/usr/local/apache"
PidFile logs/httpd.pid

Timeout 300
KeepAlive On
MaxKeepAliveRequests 100
KeepAliveTimeout 2
ServerLimit 512

<IfModule prefork.c>
    StartServers 5
    MinSpareServers 5
    MaxSpareServers 10
    MaxClients 400
    MaxRequestsPerChild 5000
</IfModule>

<IfModule worker.c>
    StartServers 20
    MaxClients 100
    ThreadsPerChild 5
    MinSpareThreads 25
    MaxSpareThreads 75
    MaxRequestsPerChild 1000
</IfModule>

<IfModule perchild.c>
    NumServers 5
    StartThreads 5
    MinSpareThreads 5
    MaxSpareThreads 10
    MaxThreadsPerChild 20
    MaxRequestsPerChild 0
</IfModule>

Listen 80

User apache
Group wwwgroup

#       ServerAdmin webmaster@dummy-host.example.com
#       DocumentRoot /www/docs/dummy-host.example.com

ServerAdmin <support-unix@example.com>
ServerName <dummy-host.example.com>

UseCanonicalName Off
DocumentRoot /srv/XX/YY/dummy-host.example.com/www
<Directory />
    Options FollowSymLinks
    AllowOverride None
</Directory>
DirectoryIndex index.html index.htm
AccessFileName .htaccess

<Files ~ "\.ht">
    Order allow,deny
    Deny from all
</Files>

<IfModule mod_mime_magic.c>
    MIMEMagicFile conf/magic
</IfModule>
```

```
HostnameLookups Off
ErrorLog "|/usr/bin/cronolog /var/log/apache/%Y%m%d-error_log"
LogLevel warn
LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\"" combined
LogFormat "%h %l %u %t \"%r\" %>s %b" common
LogFormat "%{Referer}i -> %U" referer
LogFormat "%{User-agent}i" agent
LogFormat "%h %l %u %t \"%r\" %>s %b \"%{Referer}i\" \"%{User-Agent}i\" \"%{cookie}i\"" leroymerlin
CustomLog "|/usr/bin/cronolog /var/log/apache/%Y%m%d-access_log" combined

ServerTokens Prod
ServerSignature Off

ReadmeName README.html
HeaderName HEADER.html
IndexIgnore .??* *~ *# HEADER* README* RCS CVS *,v *,t
AddLanguage ca .ca
AddLanguage cs .cz .cs
AddLanguage da .dk
AddLanguage de .de
AddLanguage el .el
AddLanguage en .en
AddLanguage eo .eo
AddLanguage es .es
AddLanguage et .et
AddLanguage fr .fr
AddLanguage he .he
AddLanguage hr .hr
AddLanguage it .it
AddLanguage ja .ja
AddLanguage ko .ko
AddLanguage ltz .ltz
AddLanguage nl .nl
AddLanguage nn .nn
AddLanguage no .no
AddLanguage pl .po
AddLanguage pt .pt
AddLanguage pt-BR .pt-br
AddLanguage ru .ru
AddLanguage sv .sv
AddLanguage zh-CN .zh-cn
AddLanguage zh-TW .zh-tw
LanguagePriority en ca cs da de el eo es et fr he hr it ja ko ltz nl nn no pl pt pt-BR ru sv zh-CN zh-TW
ForceLanguagePriority Prefer Fallback

AddDefaultCharset UTF-8

AddCharset ISO-8859-1 .iso8859-1 .latin1
AddCharset ISO-8859-2 .iso8859-2 .latin2 .cen
AddCharset ISO-8859-3 .iso8859-3 .latin3
AddCharset ISO-8859-4 .iso8859-4 .latin4
AddCharset ISO-8859-5 .iso8859-5 .latin5 .cyr .iso-ru
AddCharset ISO-8859-6 .iso8859-6 .latin6 .arb
AddCharset ISO-8859-7 .iso8859-7 .latin7 .grk
AddCharset ISO-8859-8 .iso8859-8 .latin8 .heb
AddCharset ISO-8859-9 .iso8859-9 .latin9 .trk
AddCharset ISO-2022-JP .iso2022-jp .jis
AddCharset ISO-2022-KR .iso2022-kr .kis
AddCharset ISO-2022-CN .iso2022-cn .cis
AddCharset Big5 .Big5 .big5
AddCharset WINDOWS-1251 .cp-1251 .win-1251
AddCharset CP866 .cp866
AddCharset KOI8-r .koi8-r .koi8-ru
AddCharset KOI8-ru .koi8-uk .ua
AddCharset ISO-10646-UCS-2 .ucs2
AddCharset ISO-10646-UCS-4 .ucs4
```

```

AddCharset UTF-8 .utf8
AddCharset GB2312 .gb2312 .gb
AddCharset utf-7 .utf7
AddCharset utf-8 .utf8
AddCharset big5 .big5 .b5
AddCharset EUC-TW .euc-tw
AddCharset EUC-JP .euc-jp
AddCharset EUC-KR .euc-kr
AddCharset shift_jis .sjis

AddType application/x-compress .Z
AddType application/x-gzip .gz .tgz
AddHandler type-map var
AddOutputFilterByType DEFLATE text/html text/plain text/xml

BrowserMatch "Mozilla/2" nokeepalive
BrowserMatch "MSIE 4\.0b2;" nokeepalive downgrade-1.0 force-response-1.0
BrowserMatch "RealPlayer 4\.0" force-response-1.0
BrowserMatch "Java/1\.0" force-response-1.0
BrowserMatch "JDK/1\.0" force-response-1.0
BrowserMatch "Microsoft Data Access Internet Publishing Provider" redirect-carefully
BrowserMatch "^WebDrive" redirect-carefully
BrowserMatch "^WebDAVFS/1.[012]" redirect-carefully
BrowserMatch "^gnome-vfs" redirect-carefully

ExtendedStatus On
<Location /sstatus>
    Order deny,allow
    Allow from 127.0.0.1
    #Allow from 192.168.0.0
    #Allow from all
    SetHandler server-status
</Location>

Alias /css-status /var/run/css/status

#NameVirtualHost *:80

#<VirtualHost *:80>
# ServerAdmin webmaster@dummy-host.example.com
# DocumentRoot /srv/XX/YY/dummy-host.example.com/www
# ServerName dummy-host.example.com
# ServerAlias dummy2-host.example.com
#
# ErrorLog "|/usr/bin/cronolog /var/log/apache/dummy-host.example.com/%Y%m%d-error_log"
# CustomLog "|/usr/bin/cronolog /var/log/apache/dummy-host.example.com/%Y%m%d-access_log"
#
# #Fix for Apache bug 39499
# SetEnv force-proxy-request-1.0 1
# SetEnv proxy-nokeepalive 1
#</VirtualHost>

```

1.3. Automatic startup

Edit default startup script `/etc/init.d/apache` file.

```

#!/bin/sh
#
set -e

```

```
PATH=/usr/local/sbin:/usr/local/bin:/sbin:/bin:/usr/sbin:/usr/bin
DAEMON=/usr/local/apache/bin/apachectl
NAME=httpd
DESC="Apache"

# Gracefully exit if the package has been removed.
test -x $DAEMON || exit 0

case "$1" in
  start)
    echo -n "Starting $DESC: $NAME"
    $DAEMON start
    echo "."
    ;;
  stop)
    echo -n "Stopping $DESC: $NAME"
    $DAEMON stop
    echo "."
    ;;
  reload)
    echo -n "Reloading $DESC configuration..."
    $DAEMON graceful
    echo "done."
    ;;
  restart|force-reload)
    echo -n "Restarting $DESC: $NAME"
    $DAEMON restart
    echo "."
    ;;
  *)
    echo "Usage: $SCRIPTNAME {start|stop|restart|reload|force-reload}" >&2
    exit 1
    ;;
esac

exit 0
```

Add execution right and register automatic startup.

```
chmod a+x /etc/init.d/apache
update-rc.d -f apache defaults
```

2

Upgrade

2.1. Download and Build

Same as installation section.

2.2. Upgrade

Upgrade old version to the new version.

```
/etc/init.d/apache stop
rm /usr/local/apache
ln -s /usr/local/apache-2.XX.ZZ /usr/local/apache
cp -r /etc/apache/conf /etc/apache/conf.YYYYMMDD
rm -rf /usr/local/apache/conf
rm -rf /usr/local/apache/modules
ln -s /etc/apache/conf /usr/local/apache/conf
ln -s /usr/lib/apache/modules /usr/local/apache/modules
/etc/init.d/apache start
```

3

Downgrade

3.1. Downgrade

Downgrade the current version (X.X.X) to the previous (Y.Y.Y).

```
/etc/init.d/apache stop
rm /usr/local/apache
ln -s /usr/local/apache-Y.Y.Y /usr/local/apache
cp -r /etc/apache/conf.YYYMMDD /etc/apache/conf
/etc/init.d/apache start
```

4

Java Third Party

4.1. Download and Build

Download and save Apache mod_jk source archive from <http://tomcat.apache.org/connectors-doc/>

```
cd /usr/local/src
tar -xzf tomcat-connectors-1.2.XX-src.tar.gz
cd tomcat-connectors-1-2.XX-src
cd native
./configure --with-apxs=/usr/local/apache/bin/apxs
make
cd apache2.0
```

4.2. Install

Register on Apache conf in /etc/apache/conf/httpd.conf

```
/usr/local/apache/bin/apxs -n jk -ia mod_jk.so
```

Edit and add lines in /etc/apache/conf/httpd.conf

```
<VirtualHost *:80>
...

#register tomcat web application
JkMount /manager/* worker1
...

</VirtualHost>

# Where to find workers.properties
JkWorkersFile /etc/apache/conf/workers.properties

# Where to put jk logs
JkLogFile /var/log/apache/mod_jk.log
# Set the jk log level [debug/error/info]
JkLogLevel error
# Select the log format
JkLogStampFormat "[%a %b %d %H:%M:%S %Y] "
# JkOptions indicate to send SSL KEY SIZE,
JkOptions +ForwardKeySize +ForwardURISCompat -ForwardDirectories
# JkRequestLogFormat set the request format
JkRequestLogFormat "%w %V %T"
```

Edit /etc/apache/conf/workers.properties file.

```
workers.tomcat_home=/usr/local/tomcat
workers.java_home=/usr/local/java
ps=/

worker.list=worker1

worker.worker1.port=8009
worker.worker1.host=localhost
worker.worker1.type=ajp13
```

5

PHP Third Party

5.1. Download and Build PHP

Download and save PHP source archive from <http://php.net>

```
cd /usr/local/src
md5sum php-X.Y.Z.tar.gz
#md5sum must be same as website
rm php-X.Y.Z.tar.gz
cd php-X.Y.Z
./configure --with-apxs2=/usr/local/apache/bin/apxs --with-config-file-path=/etc/php/apache --enable-ftp
make
make install
cp php.ini-dist /etc/php/apache/php.ini
mkdir -p /usr/lib/phpX/modules
```

5.2. Configure PHP

Edit and modify PHP configuration file `/etc/php/apache/php.ini`

```
register_globals = On
;Puis, modifier extension_dir par :
extension_dir = "/usr/lib/phpX/modules"
;Modifier mysql.default_socket par :
mysql.default_socket = /var/run/mysqld/mysqld.sock
```

Register PHP in Apache configuration file `/etc/apache/conf/httpd.conf`

```
#Ajouter la ligne suivante parmi les AddType
AddType application/x-httpd-php .php
#Ajouter index.php à la liste des DirectoryIndex
DirectoryIndex index.html index.html.var index.php
```

Restart Apache

```
/etc/init.d/apache restart
```

You can test PHP environment with simple PHP page and this content :

```
<? phpinfo(); ?>
```

5.3. Download and Build APC

APC is an extension of Zend PHP engine. It's executable cache, PHP page is not re-interpreted at each call. This feature will be integrate to PHP version 6.

```
cd /usr/local/src
wget http://pecl.php.net/get/APC-X.X.X.tgz
tar xzf APC-X.X.X.tgz
rm xzf APC-X.X.X.tgz
cd APC-X.X.X
/usr/local/bin/phpize
./configure --enable-apc --enable-apc-mmap --with-apxs=/usr/local/apache/bin/apxs --with-php-config=/usr/
make
make install
cp modules/apc.so /usr/lib/php5/modules
```

5.4. Configure APC

Register APC extension in PHP configuration file: /etc/php/apache/php.ini

```
;Zend extensions ...
extension=apc.so
extension=apc.so
apc.enabled=1
apc.shm_segments=1
apc.optimization=0
apc.shm_size=128
apc.ttl=7200
apc.user_ttl=7200
apc.num_files_hint=1024
apc.mmap_file_mask=/var/tmp/apc/apc.XXXXXX
apc.enable_cli=1
```

Create directory used by APC MMap algorithm.

```
mkdir /var/tmp/apc
chmod 0777 /var/tmp/apc
```

Restart Apache

```
/etc/init.d/apache restart
```

You can test PHP environment with simple PHP page and this content :

```
<? phpinfo(); ?>
```