

Apache

Type:webserver

Version:2.4.x(redhat-7) (2.2-redhat6)

Protocol:http and https and ftp

Port: http=80 and https=443

Vendor: ASF(Apache s/w foundation)

License: opensource

Installation ways:-

Yum

Rpm

Source code

Binary

Exe or msi(windows)

Yum installation

Yum install httpd

Installation path

/etc/httpd/

Directory structure

/etc/httpd

/etc/httpd/conf/httpd.conf

/etc/httpd/modules/mod_xxx.so(shared objects)

Mod_ssl.so

Mod_rewrite.so

Mod_proxy.so

Mod_proxy_ajp.so

Mod_balancer.so

Mod_proxy_http.so

Mod_ldap.so

Mod_logio.so

Mod_php.so (to run php code via apache)

Mod_authz.so

/etc/httpd/logs (symlinks)--/var/log/httpd(original)

/var/log/httpd/access.log

/var/log/httpd/error.log (any issues at apache level ,refer error.log)

/etc/httpd/conf.d/->virtualhost conf files.

/etc/httpd/run ->apache pid file creation location.

To stop and start apache(80—root or sudoer)

Redhat6(httpd as a service)

Service <servicename> stop

Service httpd stop

Service httpd start

Service httpd restart

Redhat7

Systemctl start <servicename>

Systemctl start httpd

Systemctl stop httpd

Systemctl restart httpd

Systemctl enable httpd

Apache running or not to check

ps -ef | grep httpd

netstat -anlp | grep ":80"

protocol://<systemname/urllname/dnsname/ip/>:port/contextroot

<http://35.182.225.118/>

protocol:http

iip:xxx

port:80

httpd.conf

ServerRoot "/etc/httpd"

Listen 80

Include conf.modules.d/*.conf

User apache

Group apache

ServerAdmin root@localhost

ServerName [www.example.com\(website name\)](http://www.example.com)

Used to give permissions to access website files

```
<Directory <DocumentRootpath>>
```

```
Xxxxxxxxxxxxxx
```

```
xxxxxxxxxxxxxxxx
```

```
</Directory>
```

DocumentRoot "/var/www/html"(websites files location)

DirectoryIndex index.html (this is website homepage)

ErrorLog "logs/error_log" (error log location)

LogLevel warn

LogFormat – common,combined,combinedio,custom

CustomLog "logs/access_log" combined

Browser--->http://ip

```
machine-->80--->Apache--->httpd.conf-->DocumentRoot--  
>/var/www/html/--->DirectoryIndex--index.html---><directory  
/var/www/html/>--->index.html--->output-->browser
```

Host a static website in apache. Access it with ip and dns name

#IPbased VirtualHost-2017-10-11

```
<VirtualHost 54.187.205.147:80>
ServerName www.awsmiddleware.in
DocumentRoot /opt/static/middleware
DirectoryIndex home.html
ErrorLog "/opt/logs/http/awsmiddleware/aws-error_log"
CustomLog "/opt/logs/http/awsmiddleware/aws-access_log" combined
<Directory "/opt/static/middleware">
    AllowOverride none
    Require all granted
</Directory>
</VirtualHost>
```

```
<VirtualHost *:80>
ServerName www.awsmiddleware.in
DocumentRoot /opt/static/middleware
DirectoryIndex home.html
ErrorLog "/opt/logs/http/awsmiddleware/aws-error_log"
CustomLog "/opt/logs/http/awsmiddleware/aws-access_log" combined
<Directory "/opt/static/middleware">
    AllowOverride none
    Require all granted
</Directory>
</VirtualHost>
```

#2nd VirtualHost

```
<VirtualHost *:80>
ServerName www1.awsmiddleware.in
DocumentRoot /opt/static/middleware1
DirectoryIndex login.html
ErrorLog "/opt/logs/http/awsmiddleware1/aws1-error_log"
CustomLog "/opt/logs/http/awsmiddleware1/aws1-access_log" combined
<Directory "/opt/static/middleware1">
    AllowOverride none
    Require all granted
```

```
</Directory>
</VirtualHost>
```

Source Code Installation

To get system tools and required dependencies launch below command.

```
yum groupinstall 'Development Tools'
```

Download the required packages from urls.

<https://httpd.apache.org/download.cgi#apache24>

Apache HTTP Server 2.4.29 (httpd): 2.4.29 is the latest available version

The Apache HTTP Server Project is pleased to [announce](#) the release of version 2.4.29 of the Apache HTTP Server ("Ap release of the new generation 2.4.x branch of Apache HTTPD and represents fifteen years of innovation by the project, :

For details see the [Official Announcement](#) and the [CHANGES_2.4](#) and [CHANGES_2.4.29](#) lists

- Source: [httpd-2.4.29.tar.bz2](#) [[PGP](#)] [[MD5](#)] [[SHA1](#)] [[SHA256](#)]
- Source: [httpd-2.4.29.tar.gz](#) [[PGP](#)] [[MD5](#)] [[SHA1](#)] [[SHA256](#)]
- [Binaries](#)
- [Security and official patches](#)
- [Other files](#)
- [Files for Microsoft Windows](#)

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Apache HTTP Server 2.2.34 (httpd)

The Apache HTTP Server Project is pleased to announce the release of Apache HTTP Server (httpd) version 2.2.34. Th

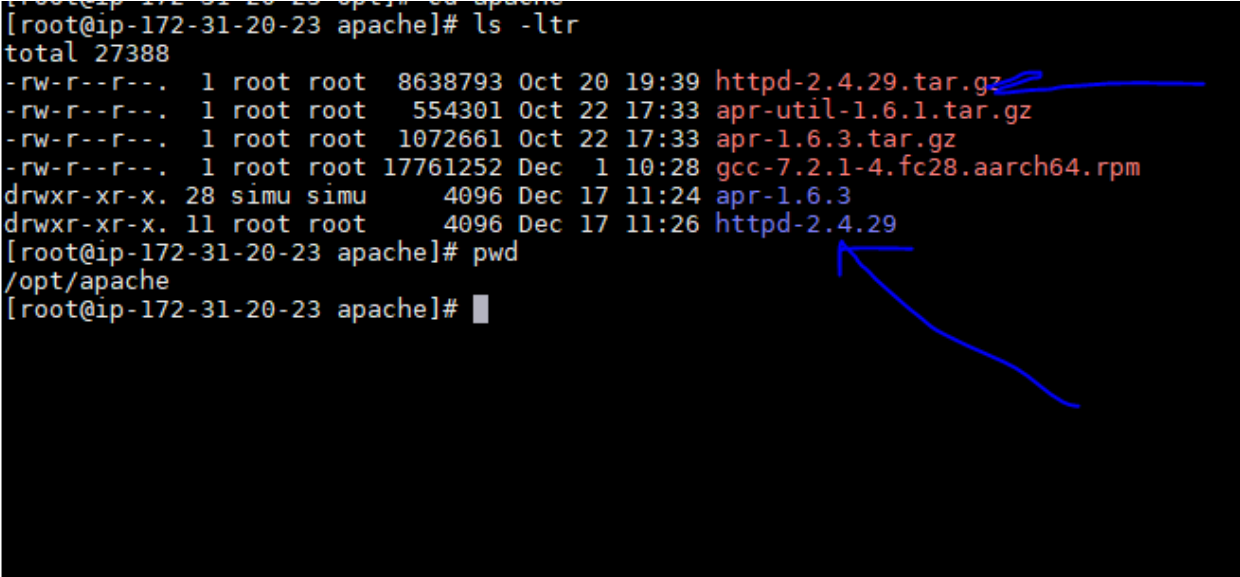
Into ec2 directly , copy the link address

wget <http://www-eu.apache.org/dist/httpd/httpd-2.4.29.tar.gz>

Extract the package after download.

tar -xvzf <package>.tar.gz

```
[root@ip-172-31-20-23 ~]# cd /opt
[root@ip-172-31-20-23 apache]# ls -ltr
total 27388
-rw-r--r--. 1 root root 8638793 Oct 20 19:39 httpd-2.4.29.tar.gz
-rw-r--r--. 1 root root 554301 Oct 22 17:33 apr-util-1.6.1.tar.gz
-rw-r--r--. 1 root root 1072661 Oct 22 17:33 apr-1.6.3.tar.gz
-rw-r--r--. 1 root root 17761252 Dec 1 10:28 gcc-7.2.1-4.fc28.aarch64.rpm
drwxr-xr-x. 28 simu simu 4096 Dec 17 11:24 apr-1.6.3
drwxr-xr-x. 11 root root 4096 Dec 17 11:26 httpd-2.4.29
[root@ip-172-31-20-23 apache]# pwd
/opt/apache
[root@ip-172-31-20-23 apache]#
```

A terminal window screenshot showing the contents of the /opt/apache directory. The output of 'ls -ltr' lists several files, including 'httpd-2.4.29.tar.gz' and 'httpd-2.4.29'. Two blue arrows are drawn on the image: one points to 'httpd-2.4.29.tar.gz' in the first column, and another points to 'httpd-2.4.29' in the last column.

./configure (throws you error, apr not found)

```

-rw-r--r-- 1 root root 10333 Dec 17 11:20 config.log
[root@ip-172-31-20-23 httpd-2.4.29]# pwd
/opt/apache/httpd-2.4.29
[root@ip-172-31-20-23 httpd-2.4.29]# ./configure
checking for chosen layout... Apache
checking for working mkdir -p... yes
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking target system type... x86_64-pc-linux-gnu
configure:
configure: Configuring Apache Portable Runtime library...
configure:
checking for APR... yes
  setting CC to "gcc"
  setting CPP to "gcc -E"
  setting CFLAGS to " -g -O2 -pthread"
  setting CPPFLAGS to " -DLINUX -D_REENTRANT -D_GNU_SOURCE"
  setting LDFLAGS to " "
configure:
configure: Configuring Apache Portable Runtime Utility library...
configure:
> checking for APR-util... no
configure: error: APR-util not found. Please read the documentation.
[root@ip-172-31-20-23 httpd-2.4.29]#

```

• MohaXterm by subscribing to the professional edition here: <http://mohaxterm.mohatek.net>

Download the apr package, from the below url

wget <http://www-eu.apache.org/dist/apr/apr-1.6.3.tar.gz>

and extract the package and install it. With same configure .

(Note: it requires gcc compiler and apr will be installed default in /usr/locapr)

Try again apache installation. Launch ./configure


```

[root@ip-172-31-20-23 httpd-2.4.29]# pwd
/opt/apache/httpd-2.4.29
[root@ip-172-31-20-23 httpd-2.4.29]# ./configure
checking for chosen layout... Apache
checking for working mkdir -p... yes
checking for grep that handles long lines and -e... /bin/grep
checking for egrep... /bin/grep -E
checking build system type... x86_64-pc-linux-gnu
checking host system type... x86_64-pc-linux-gnu
checking target system type... x86_64-pc-linux-gnu
configure:
configure: Configuring Apache Portable Runtime library...
configure:
checking for APR... yes
    setting CC to "gcc"
    setting CPP to "gcc -E"
    setting CFLAGS to " -g -O2 -pthread"
    setting CPPFLAGS to " -DLINUX -D_REENTRANT -D_GNU_SOURCE"
    setting LDFLAGS to " "
configure:
configure: Configuring Apache Portable Runtime Utility library...
configure:
checking for APR-util... no
configure: error: APR-util not found. Please read the documentation.
[root@ip-172-31-20-23 httpd-2.4.29]#

```

You have the error of apr-util not found.

wget <http://www-eu.apache.org/dist/apr/apr-util-1.6.1.tar.gz>

extact the package ----- tar -xvzf apr-util-1.6.1.tar.gz

it creates directory and change to apr-util directory and install apr-util.

```

[root@ip-172-31-20-23 apache]# ls -ltr
total 27392
drwxr-xr-x. 20 simu simu    4096 Oct 18 14:51 apr-util-1.6.1
-rw-r--r--.  1 root root   8638793 Oct 20 19:39 httpd-2.4.29.tar.gz
-rw-r--r--.  1 root root   554301 Oct 22 17:33 apr-util-1.6.1.tar.gz
-rw-r--r--.  1 root root  1072661 Oct 22 17:33 apr-1.6.3.tar.gz
-rw-r--r--.  1 root root 17761252 Dec  1 10:28 gcc-7.2.1-4.fc28.aarch64.rpm
drwxr-xr-x. 28 simu simu    4096 Dec 17 11:24 apr-1.6.3
drwxr-xr-x. 11 root root    4096 Dec 17 11:34 httpd-2.4.29
[root@ip-172-31-20-23 apache]# pwd
/opt/apache
[root@ip-172-31-20-23 apache]#

```

Launch again ./configure from apr-util directory.if you get any error launch in other as follows.

```
[root@ip-172-31-20-23 apr-util-1.6.1]# ./configure --with-apr=/usr/local/apr/
```

Next launch ----- make (if you get error) try to install below package.

Yum install expat-devel

Again launch make

Next ---- make install

Next try again apache . with configure(you will have another error for pcre)

<https://ftp.pcre.org/pub/pcre/pcre-8.00.tar.gz>

Install pcre download the pcre source code and install
(configure , make ,make install)

After installaing pcre make a try for apache.

(configure and make , make install)

