Apache Installation and Integration with weblogic

Introduction to Apache:

Apache is the most widely used web server software. Developed and maintained by Apache Software Foundation, Apache is open source software available for free. It runs on 67% of all webservers in the world.

It is fast, reliable, and secure. It can be highly customized to meet the needs of many different environments by using extensions and modules. Most **WordPress** hosting providers use Apache as their web server software. However, **WordPress** can run on other web server software as well.

Below are the pre-requirement's to configure the Apache webserver in the Linux:

Install the below packages:

1. yum install gcc -y
2. yum install pcre-devel –y
3. yum install gcc gcc-c++ autoconf automake –y

Fallow the below process:

1. Create Apache directory --- /opt/hintech/Apache
2. Your case create Apache directory in your own location
3. To install and configure we need the below dependencies.
   Apr-1.5.2.tar.gz
   Apr-util-1.5.4.tar.gz
   Pcre-8.37.tar.gz
4. Download the Apache from the apache org
   https://httpd.apache.org/download.cgi
5. I downloaded httpd-2.4.33.tar.gz from the apache and configuring the same, even if the new version or old the same configurations.

```
[root@hint109 Apache]# ls -lrt
total 10112
-rwxr-xr-x. 1 root root  874044 Jun  6 18:59 apr-util-1.5.4.tar.gz
-rwxrwxrwx. 1 root root 2041593 Jun  6 18:59 pcre-8.37.tar.gz
-rwxr-xr-x. 1 root root 6398218 Jun  6 18:59 httpd-2.4.25.tar.bz2
-rwxr-xr-x. 1 root root 1031613 Jun  6 18:59 apr-1.5.2.tar.gz
[root@hint109 Apache]#
```

6. Extract all the files
   tar -xvf apr-util-1.5.4.tar.gz
   tar -xvf apr-1.5.2.tar.gz
   tar -xvf pcre-8.37.tar.gz
   tar -xvf httpd-2.4.25.tar.bz2

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```
[root@hint109 Apache]# ls -lrt
total 16
drwxr-xr-x. 19 1000  1000 4096 Sep 17  2014 apr-util-1.5.4
drwxr-xr-x. 27 1000  1000 4096 Apr 25  2015 apr-1.5.2
drwxr-xr-x.  7 1169  1169 4096 Apr 28  2015 pcre-8.37
drwxr-xr-x. 11  501 games 4096 Dec 16  2016 httpd-2.4.25
[root@hint109 Apache]#
```

7. Change the folder structures
   mv apr-util-1.5.4 apr-util
   mv apr-1.5.2 apr
8. Place the apr and apr-utils to httpd-2.4.25 srclib location
   mv apr httpd-2.4.25/srclib/
   mv apr-util httpd-2.4.25/srclib/

Configure:

1. Now go the httpd-2.4.25 folder and run the below command.
   ./configure --prefix=/opt/Hintech/Apache_Home

```
config.status: creating build/pkg/pkginfo
config.status: creating build/config_vars.sh
config.status: creating include/ap_config_auto.h
config.status: executing default commands
configure: summary of build options:

    Server Version: 2.4.25
    Install prefix: /opt/Hintech/Apache_Home
    C compiler:     gcc -std=gnu99
    CFLAGS:          -g -O2 -pthread
    LDFLAGS:
    LIBS:
    CPPFLAGS:        -DLINUX -D_REENTRANT -D_GNU_SOURCE
    C preprocessor: gcc -E

[root@hint109 httpd-2.4.25]#
```

2. Now run make command
   make
   This command will make the apache, below the output you can see once get successes.

```
opt/hintech/Apache/httpd-2.4.25/modules/proxy -I/opt/hintech/Apache/httpd-2.4.25/modules/session -I/opt/hintech
les/ssl -I/opt/hintech/Apache/httpd-2.4.25/modules/test -I/opt/hintech/Apache/httpd-2.4.25/server -I/opt/hintec
ules/arch/unix -I/opt/hintech/Apache/httpd-2.4.25/modules/dav/main -I/opt/hintech/Apache/httpd-2.4.25/modules/c
Apache/httpd-2.4.25/modules/mappers -prefer-pic -c mod_rewrite.c && touch mod_rewrite.slo
/opt/hintech/Apache/httpd-2.4.25/srclib/apr/libtool --silent --mode=link gcc -std=gnu99  -g -O2 -pthread
ath /opt/Hintech/Apache_Home/modules -module -avoid-version  mod_rewrite.lo
make[4]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25/modules/mappers'
make[3]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25/modules/mappers'
make[2]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25/modules'
make[2]: Entering directory `/opt/hintech/Apache/httpd-2.4.25/support'
make[2]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25/support'

make[1]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25'
[root@hint109 httpd-2.4.25]#
```

3. Now run make install command
   Make install

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```
Installing configuration files
mkdir /opt/Hintech/Apache_Home/conf
mkdir /opt/Hintech/Apache_Home/conf/extra
mkdir /opt/Hintech/Apache_Home/conf/original
mkdir /opt/Hintech/Apache_Home/conf/original/extra
Installing HTML documents
mkdir /opt/Hintech/Apache_Home/htdocs
Installing error documents
mkdir /opt/Hintech/Apache_Home/error
Installing icons
mkdir /opt/Hintech/Apache_Home/icons
mkdir /opt/Hintech/Apache_Home/logs
Installing CGIs
mkdir /opt/Hintech/Apache_Home/cgi-bin
Installing header files
Installing build system files
Installing man pages and online manual
mkdir /opt/Hintech/Apache_Home/man
mkdir /opt/Hintech/Apache_Home/man/man1
mkdir /opt/Hintech/Apache_Home/man/man8
mkdir /opt/Hintech/Apache_Home/manual
make[1]: Leaving directory `/opt/hintech/Apache/httpd-2.4.25'
[root@hint109 httpd-2.4.25]#
```

This command creates the above folders to rum apache successfully.

4. We done the installation of apache now we run and test the apache is working fine or not .
5. Run the Apache under Apache_home/bin

   apachectl –k start

   apachectl –k stop

   apachectl –t ----------→ To test the sysntax

```
[root@hint109 bin]# ./apachectl -k start
[root@hint109 bin]# ps -ef | grep httpd
root      33391      1  0 17:27 ?        00:00:00 /opt/Hintech/Apache_Home/bin/httpd -k start
daemon    33392  33391  0 17:27 ?        00:00:00 /opt/Hintech/Apache_Home/bin/httpd -k start
daemon    33393  33391  0 17:27 ?        00:00:00 /opt/Hintech/Apache_Home/bin/httpd -k start
daemon    33394  33391  0 17:27 ?        00:00:00 /opt/Hintech/Apache_Home/bin/httpd -k start
root      33477   4031  0 17:27 pts/0    00:00:00 grep httpd
[root@hint109 bin]#
```

6. Modify the Conf file and index.html pages as per the below

   Conf :

   Go the Conf Directory $Apache_Home/conf/httpd.conf

   By default the port will get enable 80 for non-ssl and 443 is for ssl this we can modify in the

   Listen 80

```
#
#Listen 12.34.56.78:80
Listen 80

#
```

   Server name need to specify , by default it will take localhost

```
#ServerName www.example.com:80

ServerName 10.0.0.109:80

#
```

   htdocs:

   Go to under the htdocs and modify the index.html page

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Open in vi and delete the content and add the below content.

```
<!-- #######  HI N Technologies #########-->
<h1 style="color: #5e9ca0;">Welcoem to HI N Technologies !</h1>
<h2 style="color: #2e6c80;"> </h2>
<h2 style="color: #2e6c80;">      Your Webserver is working fine </h2>
<p>             </p>
<p> </p>
<p><strong> </strong></p>
```

7.

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Integrating with Weblogic server

1. Now we need to modify the http.conf fine under $Apache_Home/conf/httpd.conf
2. Modify the and the below values
   Hostname and port and add weblogic modules and weblogic server details .

3. Add under LoadModule location

```
#
# Dynamic Shared Object (DSO) Support
#
# To be able to use the functionality of a module which was built as a DSO you
# have to place corresponding `LoadModule' lines at this location so the
# directives contained in it are actually available _before_ they are used.
# Statically compiled modules (those listed by `httpd -l') do not need
# to be loaded here.
#
# Example:
# LoadModule foo_module modules/mod_foo.so
LoadModule weblogic_module /stage/wls_plugin/WLSPlugin_12c/lib/mod_wl_24.so
#
```

4. Add the weblogic Modules , means Admin or cluster details uder modules location .
   Below module is for weblogic Admin server

```
LoadModule alias_module modules/mod_alias.so
#LoadModule rewrite_module modules/mod_rewrite.so

################################For Admin server below module ######################################

<IfModule mod_weblogic.c>
MatchExpression *
WeblogicHost 10.0.0.102
WeblogicPort 4243
</IfModule>
################################For weblogic Cluster below Module#####################################
<IfModule mod_weblogic.c>
MatchExpression *
WeblogicCluster 10.0.0.102:4344,10.0.0.102:4345
</IfModule>
```

5. Now save and restart the Apache
6. Now access the weblogic admin console
   http://10.0.0.109/console