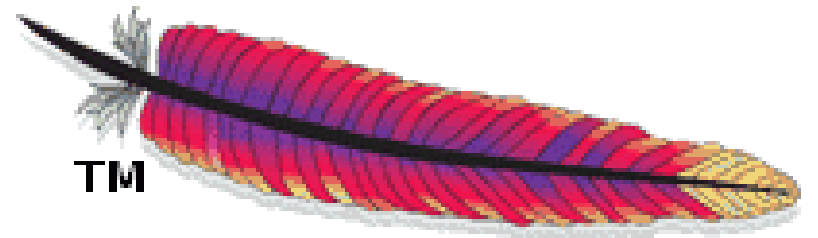


Advanced Web Programming

APACHE CONFIGURATION

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Apache?

- Apache is the most popular web server (after which comes Microsoft's IIS) available.
- The Apache HTTP server is a software (or program) that runs in the background under an appropriate operating system.
- It supports multi-tasking, and provides services to other applications that connect to it.
- It was first developed to work with Linux/Unix operating systems, but was later adapted to work under other systems, including Windows and Mac.
- The Apache binary running under UNIX is called *HTTPd* (short for HTTP daemon), and under win32 is called *Apache.exe*.

Why Apache?

The reasons behind its popularity are:

- It is free to download and install.
- It is open source
- It suits all needs: Apache can be used for small websites of one or two pages, or huge websites of hundreds and thousands of pages
- Installing Apache on Linux does require a bit of programming skills
- XAMPP, located at <https://www.apachefriends.org> , is favorite software for web developer, it includes some requires for developing web project, they are apache web server, php, mysql database, filezilla ftp server and so on.

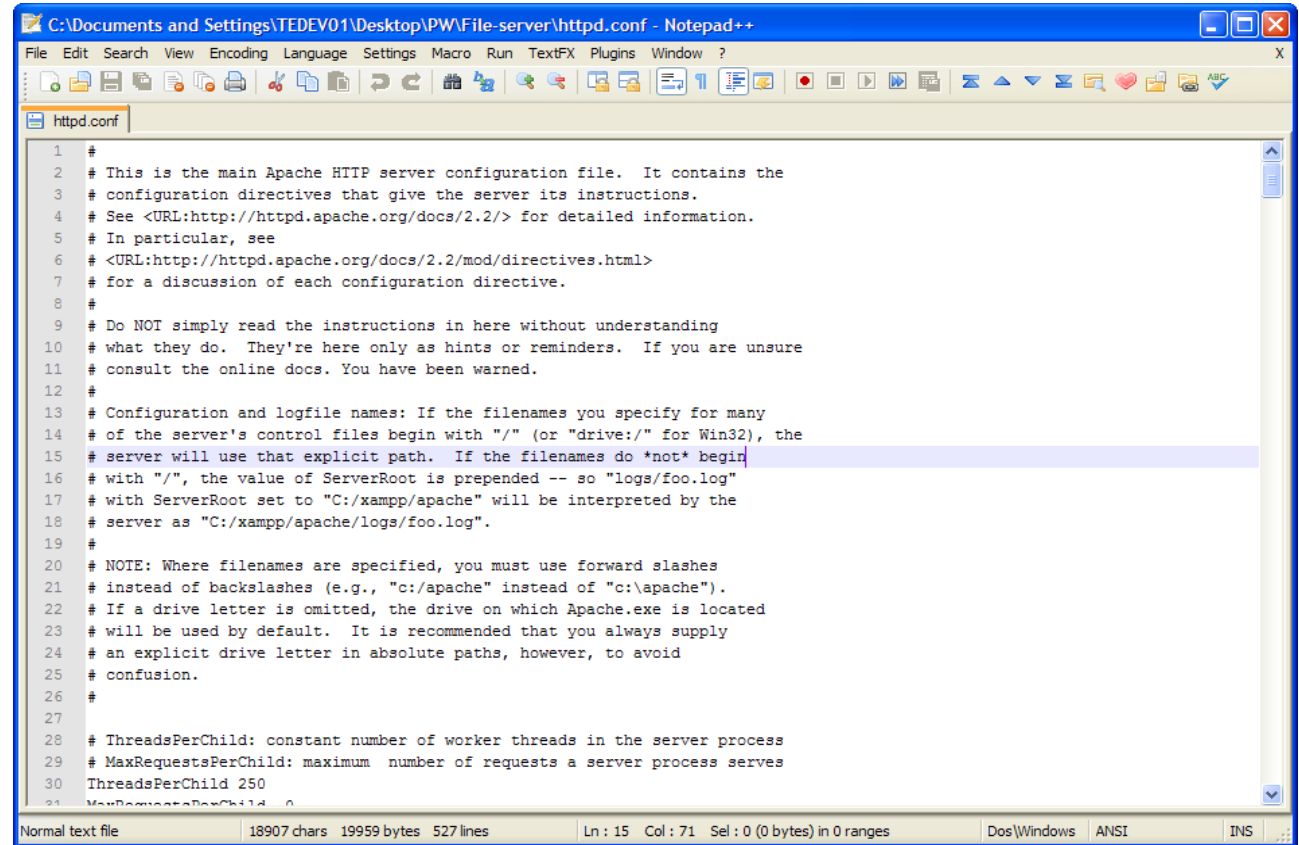
General Structure

As mentioned earlier, Apache can be installed on a variety of operating systems. Regardless of the platform used, a hosted website will typically have four main directories: *htdocs*, *conf*, *logs*, *cgi-bin*.

1. **Htdocs**, is the default Apache web server document directory
2. **Conf**, is the directory where all server configuration files are located.
3. **Logs**, is the directory where server logs are kept, and includes Apache access logs and error logs.
4. **Cgi-bin**, is the directory where CGI scripts are kept. The CGI (Common Gateway Interface) defines a way for a web server to interact with external content-generating programs.

httpd.conf

- As default, file configuration apache named httpd.conf which is located at directory xampp/apache/conf.
- You can edit/view using your favorite web editor.

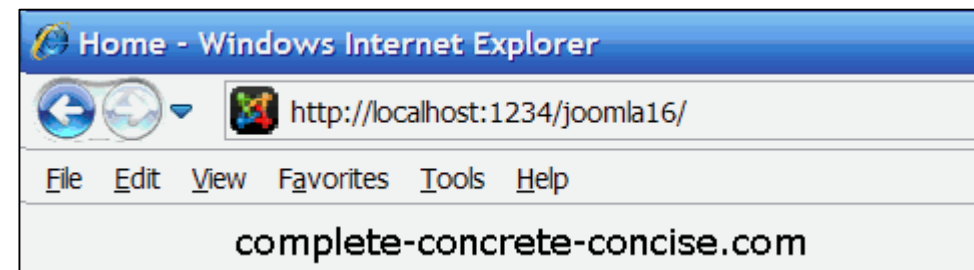
A screenshot of a Notepad++ window editing the httpd.conf file. The title bar shows the file path: C:\Documents and Settings\TEDEV01\Desktop\PW\File-server\httpd.conf - Notepad++. The menu bar includes File, Edit, Search, View, Encoding, Language, Settings, Macro, Run, TextFX, Plugins, Window, and Help. The toolbar contains various icons for file operations and editing. The text area shows the beginning of the httpd.conf file, with line numbers 1 through 31 on the left. The content consists of several lines of comments explaining the file's purpose and providing instructions on how to use paths. Line 15, which contains the text "If the filenames do *not* begin", is highlighted in light blue. The status bar at the bottom indicates "Normal text file", "18907 chars 19959 bytes 527 lines", and cursor coordinates "Ln : 15 Col : 71 Sel : 0 (0 bytes) in 0 ranges". It also shows the active encoding as "ANSI" and the current language as "INS".

```
1 #
2 # This is the main Apache HTTP server configuration file. It contains the
3 # configuration directives that give the server its instructions.
4 # See <URL:http://httpd.apache.org/docs/2.2/> for detailed information.
5 # In particular, see
6 # <URL:http://httpd.apache.org/docs/2.2/mod/directives.html>
7 # for a discussion of each configuration directive.
8 #
9 # Do NOT simply read the instructions in here without understanding
10 # what they do. They're here only as hints or reminders. If you are unsure
11 # consult the online docs. You have been warned.
12 #
13 # Configuration and logfile names: If the filenames you specify for many
14 # of the server's control files begin with "/" (or "drive:/ for Win32), the
15 # server will use that explicit path. If the filenames do *not* begin
16 # with "/", the value of ServerRoot is prepended -- so "logs/foo.log"
17 # with ServerRoot set to "C:/xampp/apache" will be interpreted by the
18 # server as "C:/xampp/apache/logs/foo.log".
19 #
20 # NOTE: Where filenames are specified, you must use forward slashes
21 # instead of backslashes (e.g., "c:/apache" instead of "c:\apache").
22 # If a drive letter is omitted, the drive on which Apache.exe is located
23 # will be used by default. It is recommended that you always supply
24 # an explicit drive letter in absolute paths, however, to avoid
25 # confusion.
26 #
27 #
28 # ThreadsPerChild: constant number of worker threads in the server process
29 # MaxRequestsPerChild: maximum number of requests a server process serves
30 ThreadsPerChild 250
31 MaxRequestsPerChild 0
```

Port Configuration

- By default, Apache Server listens on port 80, but this can be changed.
- Why Change the Port?
 - Perhaps certain ports are blocked by your network admin or ISP (although, I would not recommend running XAMPP as a publicly accessible server).
 - Perhaps port 80 is already being used by some other application (like IIS) and you don't want to or are not allowed to shut it down or change it.
- How to Change the Port
 - Edit the ***httpd.conf*** file to change the port Apache listens on.
 - Change the port number(80) to different number (1234).

```
44 #  
45 #Listen 0.0.0.0:80  
46 #Listen [:*]:80  
47 Listen 80  
48  
49 #  
complete-concrete-concise.com
```



Document root Configuration

Here are the steps you have to move document root to another directory.

- Open the file httpd.conf
- Search for DocumentRoot and you will get something like this: **DocumentRoot "C:/xampp/htdocs"**
- Update the DocumentRoot to new location. For example, **DocumentRoot to "D:/www"**
- Then find the Directory and you will find something similar to **<Directory "C:/xampp/htdocs">**
- Update it to new location like this **<Directory "D:/www">**
- Then finally restart the Apache server using XAMPP control panel or manually.
- That's it, you are done. The DocumentRoot has been moved to new place successfully.

Virtual host

- Using Apache Virtual Host, you can run several websites on the same server.
- For example, I can run both thegeekstuff.com and top5freeware.com on a single physical server that has one Apache webserver running on it.
- There are two types of Apache virtual host configurations: 1) IP-Based Virtual Host and 2) Name-based Virtual Host. Name-based virtual host is recommended for most scenarios.

Vhost Configuration

- Open file **httpd-vhosts.conf**, it usually located at directory /conf/extra
- Add this configuration script

```
53 Alias /project "D:/project/"
54     <Directory "D:/project/">
55         Options Indexes FollowSymLinks MultiViews IncludesNoExec
56         AddOutputFilter Includes html
57         AllowOverride None
58         Order allow,deny
59         Allow from all
60     </Directory>
```

- Save and restart apache service

References

- http://www.w3schools.com/website/web_host_intro.asp
- <http://code.tutsplus.com/tutorials/an-introduction-to-apache--net-25786>
- <http://www.computerhope.com/jargon/a/apache.htm>
- <http://complete-concrete-concise.com/web-tools/how-to-change-the-apache-port-in-xampp>
- <http://blog.mdsohelrana.com/2011/11/01/how-to-change-the-document-root-in-xampp-on-windows/>
- <http://www.thegeekstuff.com/2011/07/apache-virtual-host/>

Any questions??



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Thank You
