Apache 2.4 Build documentation

Build documentation to compile the module from the source code.

1) Downloading Apache 2.4 source distribution

Goto http://httpd.apache.org/download.cgi#apache24 to download the source distribution i.e. '**httpd-2.4.4.tar.gz**'. The Unix source distribution is fine as it also contains the Windows Makefile.

2) Download Apache Portable Runtime

Goto http://apr.apache.org/download.cgi and download the apr, apr-util and apr-iconv files and extract them into the srclib folder as shown in picture.

APR 1.4.8:   apr-1.4.8-win32-src.zip
APR-util 1.5.2:   apr-util-1.5.2-win32-src.zip
APR iconv 1.2.1: apr-iconv-1.2.1-win32-src-r2.zip
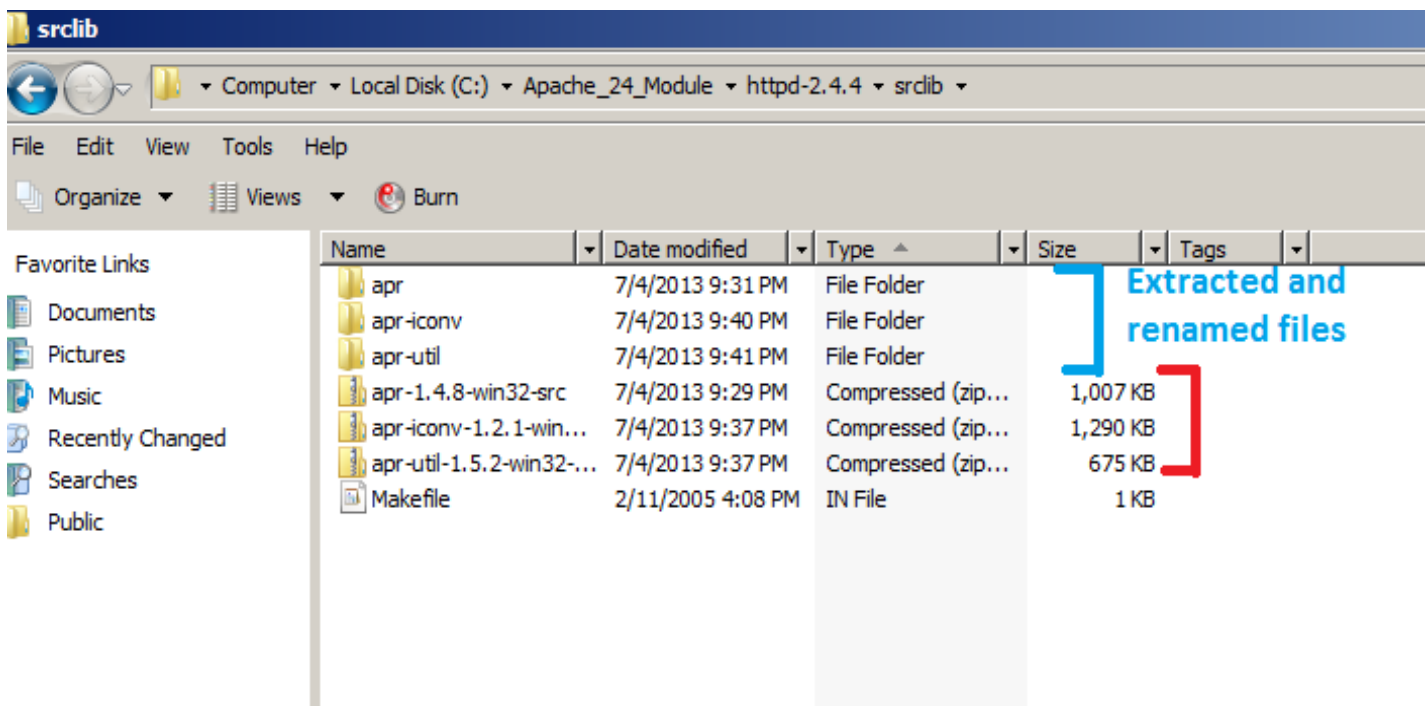
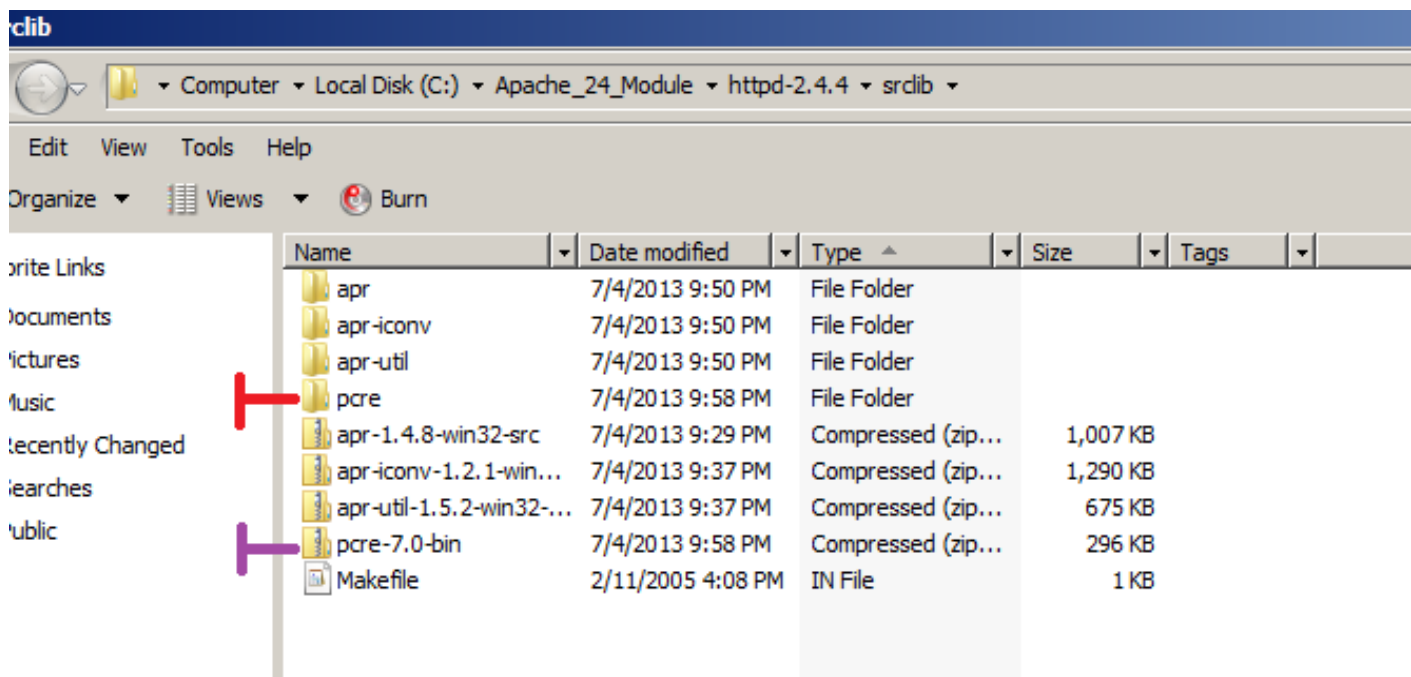**3) Install Perl and Awk and add it to the system path. For Perl you can use ActivePerl and for Awk you can use.**

http://www.cs.princeton.edu/~bwk/btl.mirror/awk95.exe

4) Download and extract PCRE(Perl Compatible Regular Expressions) for Windows

http://gnuwin32.sourceforge.net/packages/pcre.htm
Download the following files:
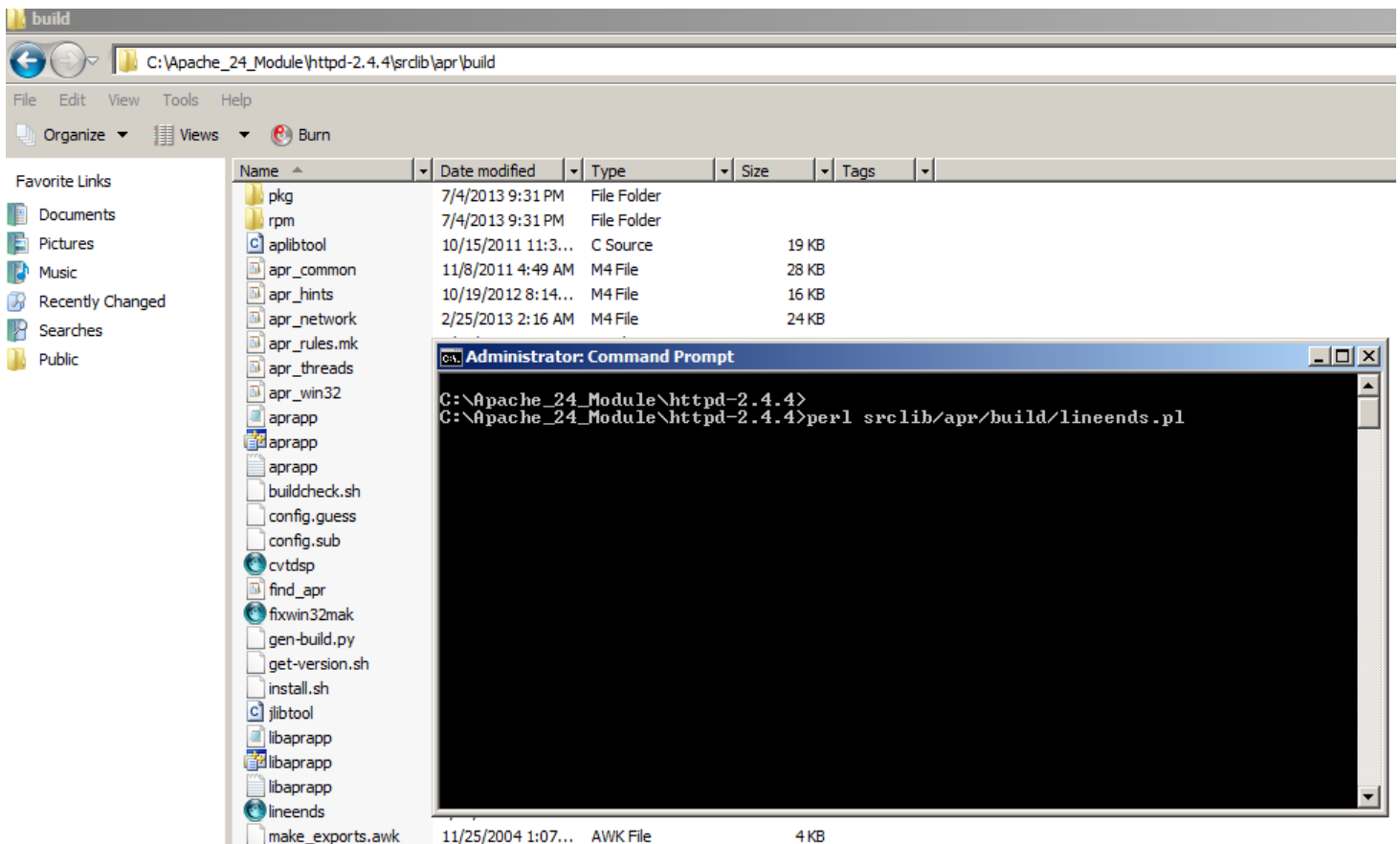*pcre-bin-zip.php, pcre-lib-zip.php, pcre-src-zip.php*

5) Now run the following commands to convert the line endings to be suitable for Windows

perl .\srclib\apr\build\lineends.pl
and
perl .\srclib\apr\build\cvtdsp.pl -2005
(to convert into Visual Studio 2005 format)

6) Now import "Apache.dsw" into Visual studio and right click "InstallBin" and set as start up project.

Now open the "Configuration manager" as shown below and uncomment the following for both "Release" and "Debug"

- all projects beginning apr_db
- BuildAll
- BuildBin
- Fcgistarter
- gen_test_char
- InstallBin
- Libarpiconv_ccs_modules
- Libarpiconv_ces_modules
- Mod_lbmethod_rr
- Mod_lua
- Mod_session_crypto
- Mod_socache_dc
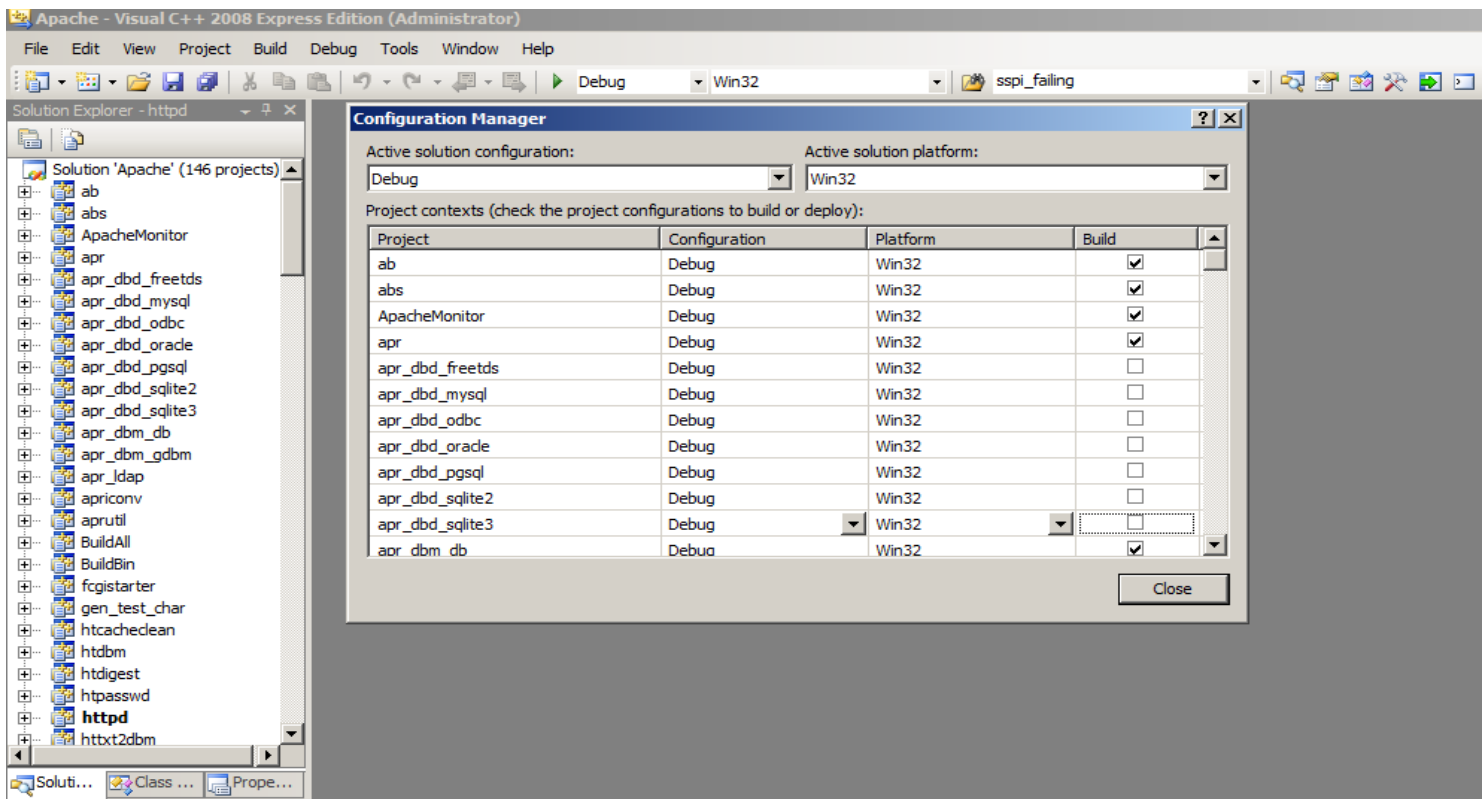
7) Now change the properties of the following

    a) **libhttpd:**
- ○ Configuration Properties -> Linker -> General -> Additional Library Directories add .\srclib\pcre\lib (Location of pcre.lib)
- ○ Configuration Properties -> C/C++ -> General -> Additional Include Directories add ./srclib/pcre/include (location of pcre.h)
- ○ Open ApacheMonitor.rc and comment out the following line with a #:
- ○ "CREATEPROCESS_MANIFEST_RESOURCE_IF RT_MANIFEST "ApacheMonitor.manifest"

    b) **ApacheMonitor:**
- ○ Configuration Properties -> C/C++ -> Manifest Tool -> Input and Output -> Additional Manifest Files. Add ApacheMonitor.manifest

    c) **Mod_xml2enc:**
- ○ Configuration Properties -> C/C++ -> General -> Additional Include Directories add ./srclib/apr-iconv/lib

     www.informer.de

8) Now start the build solution under Visual studio. It should go fine and create the libhttpd and also the httpd.exe files. If there is any problem please follow the "Build Libxml2" part from the 2nd link given under "Useful links" section of this document

9) Now as Apache is build from source we can start building our NTLM module. Please edit the Makefile of the NTLM module and add the correct paths for APACHEDIR, MSVCDIR and PLATSDKDIR

APACHEDIR=<path to the apache 2.4 build>
MSVCDIR=<path to visual studio> Ex: C:\Program Files\Microsoft Visual Studio 9.0\VC
PLATSDKDIR=<path to SDK> Ex: C:\Program Files\Microsoft SDKs\Windows\v6.1

Now run "vavars32.bat" as shown in the picture to set up the visual studio paths and environment for building up the module.
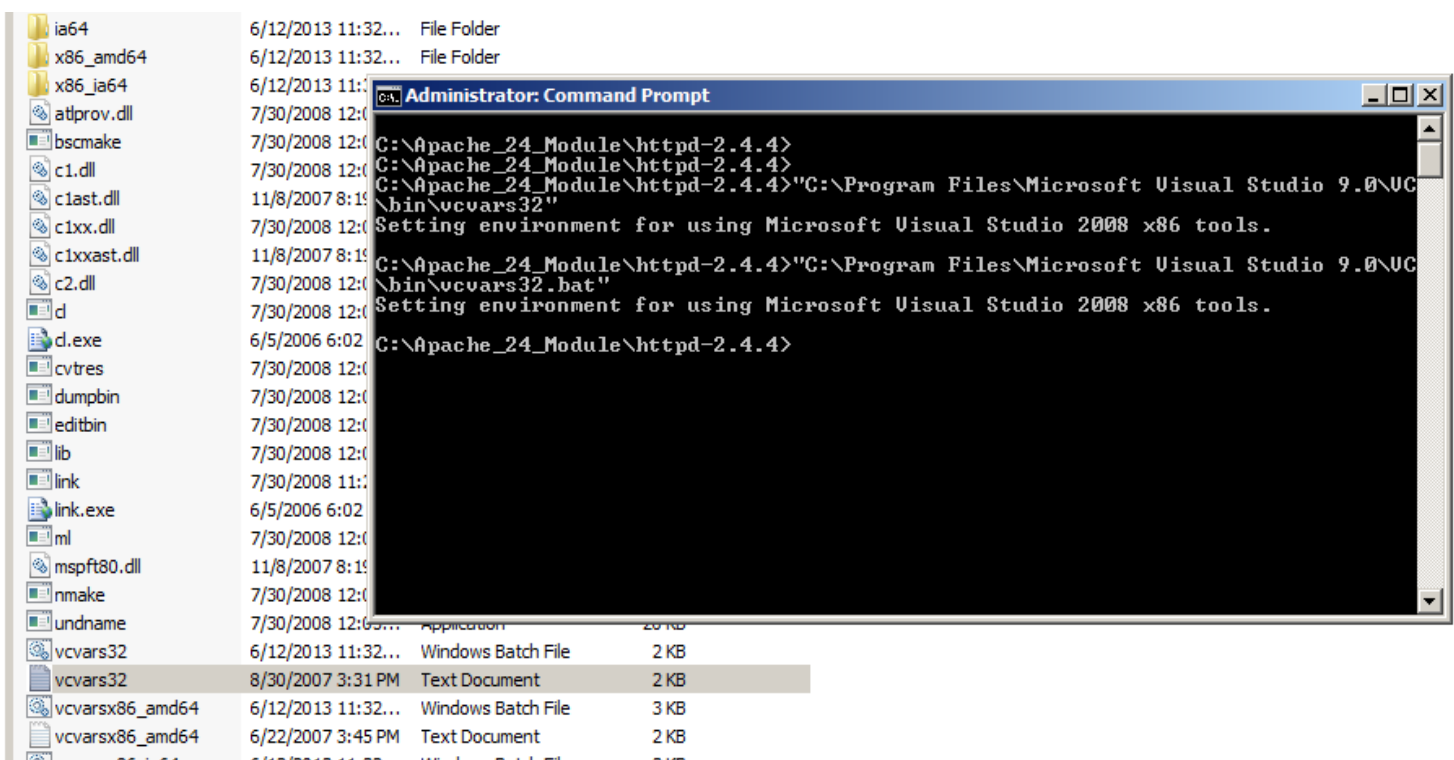
10) Now run "nmake dist" to compile the module. When the module compilation is successful copy it under the modules directory of Apache and the following to httpd.conf

```
# Please make this the last module in the list
LoadModule auth_ntlm_module modules/mod_authn_ntlm.so

<Location / >
    AllowOverride None
    Options None
    Order allow,deny
    Allow from all
    AuthName "Private location"
    AuthType SSPI
    NTLMAuth On
    NTLMAuthoritative On
    require valid-user
</Location>
```

Now start or restart the Apache server and done.

Useful links:

1. http://httpd.apache.org/docs/2.4/platform/win_compiling.html
2. http://wgsnetman.blogspot.com/2013/04/building-apache-244-from-unix-source.html