**Upgrade Apache**

First, you must set up Linux Virtual Machine in your machine.

Follow all the steps to compile Apache 2.4.62 with Apr and Apr-utils in Linux GW.

**Step 1:** Download all the requisite packages. So run below command in terminal of Linux Virtual Machine.

***wget https://dlcdn.apache.org/httpd/httpd-2.4.63.tar.gz***

***wget https://dlcdn.apache.org/apr/apr-1.7.5.tar.gz***

***wget*** [***https://dlcdn.apache.org/apr/apr-util-1.6.3.tar.gz***](https://dlcdn.apache.org/apr/apr-util-1.6.3.tar.gz  )

**Step 2:** Compile and install Apr

***$ tar -xvf apr-1.7.5.tar.gz***

***$ cd apr-1.7.5/***

***$ ./configure***

***$ make -j$(nproc)***

***$ sudo make install***

**Step 3:** Compile and install apr-util

***$ tar -xvf apr-util-1.6.3.tar.gz***

***$ cd apr-util-1.6.3/***

***$ ./configure --with-apr=/usr/local/apr/***

***$ make -j$(nproc)***

***$ sudo make install***

**Step 4:** Compile and install Apache.

***$ tar -xvf httpd-2.4.63.tar.gz***

***$ cd httpd-2.4.63/***

***$ ./configure --enable-ssl --enable-mpms-shared=all --enable-nonportable-atomics=yes --with-mpm=prefork***

***$ make -j$(nproc)***

***$ sudo make install***

**Step 5:** Now create a folder **“Apache2\_4\_63”** in your local machine and copy /**usr/local/apache2** and **/usr/local/apr** folder into **Apache2\_4\_63** from **Virtual Machine**.

**Step 6**: Copy all files from **\\172.30.92.34\media\Niraj\apache2\_4\_61\_file** into **Apache2\_4\_62**

**Step 7**: Copy **mod\_security2.so** from **\\172.30.92.34\media\Niraj\mod\_security** into **Apache2\_4\_62/apache2/modules** folder.

**Step 8:** Now configure all the settings from the previous version of apche2 conf file

**Step 9:** Now copy **“Apache2\_4\_62”** folder on Linux Gateway

**Step 10:** enter in **“Apache2\_4\_62”** folder.

**Step 11**: before running update.sh ***give executable permissions by***

sudo chmod +x update.sh

**Step 12**: Then run **./update.sh** command by putty and after successfully verify Apache version and then update httpd.conf settings accordingly.

**Install PHP from source code for ubuntu18**

Login into Linux VM and open terminal

$ wget https://www.php.net/distributions/php-8.3.15.tar.gz

***$ tar -xvf*** php-8.3.15.tar.gz

***$ cd*** php-8.3.15

$ ./configure --prefix=/usr/local/php --with-apxs2=/usr/local/apache2/bin/apxs --disable-cgi --enable-ftp --enable-mbstring --with-curl --with-openssl --enable-soap --enable-gd --with-jpeg --with-mysqli --with-pgsql --with-ldap --enable-intl --with-xsl --with-zlib --enable-sockets --with-libxml --with-zip --with-pdo-mysql --enable-bcmath --enable-exif --with-ffi --with-readline --with-sodium --without-pcre-jit --with-freetype --with-gettext --with-imagick --enable-pcntl --enable-shmop --enable-sysvmsg --enable-sysvsem --enable-sysvshm --enable-calendar --with-pdo-pgsql --with-pgsql --enable-pdo --enable-opcache --with-pear --with-iconv

$ make -j$(nproc)

$ sudo make install

$ sudo cp php.ini-production /usr/local/php/lib/php.ini

$ sudo chmod 755 /usr/local/apache2/modules/libphp.so

Now follow the bellow steps:

- Create an **update\_php8\_3\_15** directory and enter in

- run bellow commands  
  
$ sudo zip -r php.zip /usr/local/php

$ cp /usr/local/apache2/modules/libphp.so .

- Add php.ini settings from previous version of PHP

- Add **LoadModule php\_module modules/libphp.so** into **httpd.conf** of apache2 if not added

- Copy **mod\_security2.so** into **/usr/local/apache2/modeuls/** from previous version of apache2

Now make a script with contains

- Copy **php** folder folder into **/usr/local**

**-** Move **libphp.so** into **/usr/local/apache2/modules/** folder

**Download PHP packages for ubuntu22**

# use gateway for this process and add ppa repository for below steps.

# Create a folder php8\_3\_packages

# apt download libapache2-mod-php8.3 php-common php8.3 php8.3-bcmath php8.3-cli php8.3-common php8.3-curl php8.3-gd php8.3-imagick php8.3-intl php8.3-ldap php8.3-mbstring php8.3-mysql php8.3-opcache php8.3-pgsql php8.3-readline php8.3-soap php8.3-sqlite3 php8.3-xml php8.3-zip

# After download PHP package move all .deb files into php8\_4\_packages

# during .deb installation some dependencies required. if any if any dependencies available then download the dependencies and move that into php\_dependenciese folder.

**Upgrade PHP in Windows Gateway**

* Download PHP binaries from [https://windows.php.net/downloads/releases/archives/php-8.3.15-Win32-vs16-x86.zip](https://windows.php.net/downloads/releases/archives/php-8.3.14-Win32-vs16-x86.zip)
* Rename **php.ini-production** to php.ini
* Add **php.ini** settings from previous version of PHP
* Create ioncube folder and add respective version from <https://downloads.ioncube.com/loader_downloads/ioncube_loaders_win_vc16_x86.zip>
* Now rename **php-8.3.15-Win32-vs16-x86** to **php**.
* Now copy **php** folder into **c:\tc\httpd\php**
* Then restart apache2