**What is Cygwin?**

Cygwin is a "command-line interface" (i.e. a terminal, like the terminal on Linux or Terminal.app on Mac OS X) for Windows. You can run normal UNIX programs like "ls" and "cd", or even more sophisticated ones like "gcc". It also allows you to SSH into remote computers, which makes it a perfect alternative to PuTTY.

**Set up Apache, PHP, and MySQL (MariaDB) in Windows under Cygwin**

References:

<http://techne.alaya.net/?p=13579>

<http://umusebo.com/installing-and-configuring-apache-php-mysql-on-cygwin/#.WlK4IE2Wycw>

The command to configure the Apache web server is

/etc/rc.d/init.d/httpd install

The package *mysql* in Cygwin is actually MariaDB.

Ensure there is no prior MySQL installation. If there is, uninstall them all.

**Instructions:**

**1.** Install Cygwin or Cygwin64

**2.** During install, select the following packages to install:

|  |  |  |  |
| --- | --- | --- | --- |
| Full | Full | Full | Category |
| util-linux  openSSH  cygrunsrv  bzip2  libapr1-devel  libaprutil1-devel  gawk | setuptools  openssl  make (automake, make, make-debuginfo)  cmake  wget | gcc-core  gcc-g++  readline  cpan  bison  ncurses | mysql  python  perl  Boost  php  httpd |

**3.** After the install is finished, open a Cygwin terminal [as Administrator](http://www.sevenforums.com/tutorials/11841-run-administrator.html) and run:

cygserver-config (answer “yes” to prompt)

/etc/rc.d/init.d/httpd install

**4.** Start cygserver and httpd:

From within the same Cygwin terminal running as Administrator, run:

cygrunsrv -S cygserver

cygrunsrv -S httpd

Use the -Q option to ensure the service is running (eg: cygrunsrv -Q cygserver)

**5.** Everything should be working. If there was an error at startup look at /var/log/httpd/error\_log

**6.** Reload Apache with the new configuration:

from the Administrator terminal run:

/etc/rc.d/init.d/httpd restart

**8.** The document root is at:

/srv/www/htdocs/

**Set up MariaDB (MySQL)**

Note that this actually sets up MariaDB which is named mysql in Cygwin.

from the Administrator terminal run:

*mysql\_install\_db*

Start the mysql server:

*mysqld\_safe &*

then run:

*mysql\_secure\_installation*

You should then be able to log in to MariaDB from a non-administrative shell with:

mysql -u root -p

**Install the MariaDB service**

First stop any running instance (run in an admin shell):

*mysqladmin.exe -u root -p shutdown*

Then install the service:

cygrunsrv.exe -I mysqld -d "Cygwin MariaDB server" -p /usr/bin/mysqld\_safe

You can start it with:

*cygrunsrv -S mysqld*

**Updating Cygwin**

Updating is an important part of maintaining security and ensuring you have the latest packages with bugfixes and improvements.

Here’s convenient way to easily update Cygwin:

1. If you don’t have a bin directory inside your home directory, create it:  
mkdir ~/bin

2. Make sure ~/bin is included in your $PATH. Edit ~/.bash\_profile and make sure your PATH statement includes ~/bin. It should look something like:  
PATH="${HOME}/bin:${PATH}"

3. Create a script in ~/bin called setup. Use your favorite editor. It should contain:  
#!/bin/sh  
cygstart -- /setup-x86\_64.exe &  
Note the above code assumes that you have the Cygwin setup file in the root directory of your Cygwin installation (for example C:\cygwin64\setup-x86\_64.exe)

Run a terminal as Administrator and then just type setup and press enter to start the Cygwin setup/update process. For updating just click next/ok for each dialog Window.

### Install apt-cyg

You may have heard of programs like apt-get (Ubuntu), yum/dnf (Fedora), pacman (Arch), or brew (Mac OS X). These programs help manage the installation and upkeep of other command line programs on their respective operating system (for this reason, they are known as "package managers"). The analogous program for Cygwin is called apt-cyg.

Installing apt-cyg is simple. First, save this file: <https://raw.githubusercontent.com/transcode-open/apt-cyg/master/apt-cyg>. Then, use File Explorer to find the file in your Downloads folder and move it into C:\cygwin\bin. Then, open Cygwin and enter "chmod +x /bin/apt-cyg". This tells Cygwin that you want to be able to execute the apt-cyg command. Lastly, enter "apt-cyg mirror ftp://sourceware.org/pub/cygwin". This sets up apt-cyg to use the official repository when downloading programs.

MySQLdb installation on cygwin

***MySQLdb***, a.k.a. ***MySQL-python*** is the Python module implementing the DB-API spec (moved into PEP 249; this PEP supersedes the old DB-API 1.0 specification, which is PEP 248 ).

1. Change your directory to /usr/src and download MySQL-python from https://sourceforge.net/projects/mysql-python/files/mysql-python/1.2.3/

$ **cd** /usr/src

$ **wget** <https://sourceforge.net/projects/mysql-python/files/mysql-python/1.2.3/MySQL-python-1.2.3.tar.gz>

2. Unpack

$ tar xfz MySQL-python-1.2.1.tar.gz

$ cd MySQL-python-1.2.1

3. edit **site.cfg** file

$ vi site.cfg

change “threadsafe = True” to “threadsafe = False”

4. Install python-devel package

$ apt-cyg install python-devel

5. Install mysql-python

$ python setup.py build

$ python setup.py install

6. Check Installation

$ python

>>> import MySQLdb

Possible Issues:

1. Cygwin window closes immediately

If you have any Cygwin service installed in your Windows machine try solving the problem by setting these services to either manual start or automatic start but delayed.

Run cmd as administrator

sc config cygserver start= delayed-auto