

## Installing GDAL for Windows

(Walkthrough taken from <http://sandbox.idre.ucla.edu/sandbox/tutorials/installing-gdal-for-windows>)

GDAL is a useful command line tool to process spatial data, if you haven't heard of the tool before some examples of what it can do are:

- Create contours from a DEM
- Create a TMS tile structure
- Rasterize vector into a raster file
- Build a quick mosaic from a set of images

Each of the above functions are python scripts which can be run from the command-line once GDAL is successfully installed.

This tutorial covers how to install GDAL on a Windows PC, if you are interested in getting GDAL running on a Mac please go here (<http://sandbox.idre.ucla.edu/?p=779>).

## Step 1: Install Python

Python is necessary for GDAL, and if you already have an installation of Python then skip to step 4 below.

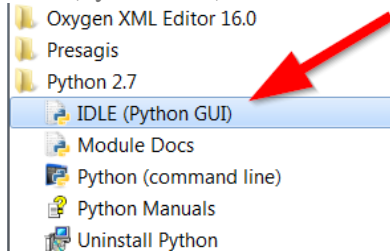
1. Feel free to download the latest 2.7x version of python (rather than the 3.x python version).

The python version used for this tutorial can be downloaded here:

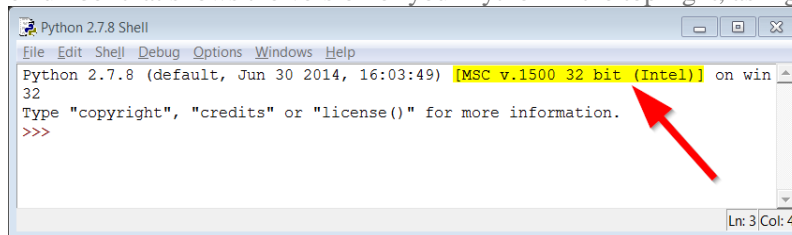
<https://www.python.org/ftp/python/2.7.8/python-2.7.8.msi>

2. Install python with the default options and directories.

3. After installation, go to Python -> IDLE (Python GUI) to find out what version of Python you are using:



4. Make a note of the number that shows the version of your Python in the top right, as highlighted below:



Note: MSC v.1500 may differ if you are using a different Python installation, if it does then please make a note of that number. Note, if you installed the 64-bit version of Python, for the rest of the tutorial please remove the (x86) from the paths.

## Step 2: Install GDAL

1. Head over to [Tamas Szekeres' Windows binaries](#) and download the appropriate GDAL Binary. For this tutorial, we are using the MSC v.1500 on a 32-bit system, the picture below illustrates how to match the version with your own python version. The blue highlight is where you should look for either 64-bit or 32-bit systems, and the green shows the release-1500 number which should match the number from IDLE in step 4 above.

Compiler	Arch.	Downloads	Package Info	Date	Revisions
MSVC 2005	win32	<a href="#">release-1400-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:45:35	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2005	x64	<a href="#">release-1400-x64-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:43:56	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2008	win32	<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:45:04	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2008	x64	<a href="#">release-1500-x64-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:42:35	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2010	win32	<a href="#">release-1600-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:44:41	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2010	x64	<a href="#">release-1600-x64-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-07 13:46:02	<a href="#">44ac087</a> <a href="#">r27733</a>
MSVC 2012*	win32	<a href="#">release-1700-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-18 20:19:56	<a href="#">0efde12</a> <a href="#">r28330</a>
MSVC 2012*	x64	<a href="#">release-1700-x64-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-18 20:16:55	<a href="#">0efde12</a> <a href="#">r28330</a>
MSVC 2013*	win32	<a href="#">release-1800-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-18 20:12:11	<a href="#">0efde12</a> <a href="#">r28330</a>
MSVC 2013*	x64	<a href="#">release-1800-x64-gdal-1-11-1-mapserver-6-4-1</a>	<a href="#">information</a>	2015-01-18 20:08:43	<a href="#">0efde12</a> <a href="#">r28330</a>

2. Clicking the link will take you to the list of binaries (installers) to download.

Available downloads ([release-1500-gdal-1-11-1-mapserver-6-4-1](#)):

File name	File date	Size	Description
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1.zip</a>	2015-01-07 13:45:04	26032 kB	Compiled binaries in a single .zip package
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-src.zip</a>	2015-01-07 13:44:20	15033 kB	GDAL and MapServer sources
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-libs.zip</a>	2015-01-07 13:44:47	15656 kB	Compiled libraries and headers
<a href="#">gdal-111-1500-ecw.msi</a>	2014-12-14 21:15:57	2594 kB	Installer for the GDAL ECW plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.3.msi</a>	2014-12-14 21:15:48	416 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">gdal-111-1500-mrsid.msi</a>	2014-12-14 21:15:59	2641 kB	Installer for the GDAL MrSID plugin (must be installed to the same directory as the GDAL core)
<a href="#">gdal-111-1500-core.msi</a>	2014-12-14 21:15:56	19846 kB	Generic installer for the GDAL core components
<a href="#">mapserver-6.4.1-1500-core.msi</a>	2014-12-14 21:16:07	22314 kB	MapServer installer with IIS registration support
<a href="#">gdal-111-1500-oracle.msi</a>	2014-12-14 21:15:59	912 kB	Installer for the GDAL Oracle plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.2.msi</a>	2014-12-14 21:15:48	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.1.msi</a>	2014-12-14 21:15:47	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">gdal-111-1500-filegdb.msi</a>	2014-12-14 21:15:57	1876 kB	Installer for the GDAL FileGDB plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py2.7.msi</a>	2014-12-14 21:15:47	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)

3. Locate the “core” installer, which has most of the components for GDAL.

Available downloads (**release-1500-gdal-1-11-1-mapserver-6-4-1**):

File name	File date	Size	Description
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1.zip</a>	2015-01-07 13:45:04	26032 kB	Compiled binaries in a single .zip package
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-src.zip</a>	2015-01-07 13:44:20	15033 kB	GDAL and MapServer sources
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-libs.zip</a>	2015-01-07 13:44:47	15656 kB	Compiled libraries and headers
<a href="#">gdal-111-1500-ecw.msi</a>	2014-12-14 21:15:57	2594 kB	Installer for the GDAL ECW plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.3.msi</a>	2014-12-14 21:15:48	416 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">gdal-111-1500-mrsid.msi</a>	2014-12-14 21:15:59	2641 kB	Installer for the GDAL MrSID plugin (must be installed to the same directory as the GDAL core)
<a href="#">gdal-111-1500-core.msi</a>	2014-12-14 21:15:56	19846 kB	Generic installer for the GDAL core components
<a href="#">mapserver-6.4.1-1500-core.msi</a>	2014-12-14 21:16:07	22314 kB	MapServer installer with IIS registration support
<a href="#">gdal-111-1500-oracle.msi</a>	2014-12-14 21:15:59	912 kB	Installer for the GDAL Oracle plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.2.msi</a>	2014-12-14 21:15:48	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.1.msi</a>	2014-12-14 21:15:47	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">gdal-111-1500-filegdb.msi</a>	2014-12-14 21:15:57	1876 kB	Installer for the GDAL FileGDB plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py2.7.msi</a>	2014-12-14 21:15:47	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)

4. After downloading your version, install GDAL with standard settings.

5. Next, return to the list of GDAL binaries and install the python bindings for your version of Python, this can either be 2.7, 3.1, or 3.2.

Recall that we had installed Python 2.7 earlier, so we have to locate this version, as seen below:

Available downloads (**release-1500-gdal-1-11-1-mapserver-6-4-1**):

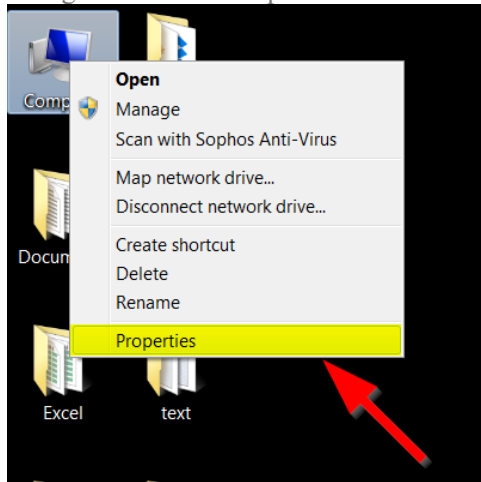
File name	File date	Size	Description
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1.zip</a>	2015-01-07 13:45:04	26032 kB	Compiled binaries in a single .zip package
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-src.zip</a>	2015-01-07 13:44:20	15033 kB	GDAL and MapServer sources
<a href="#">release-1500-gdal-1-11-1-mapserver-6-4-1-libs.zip</a>	2015-01-07 13:44:47	15656 kB	Compiled libraries and headers
<a href="#">gdal-111-1500-ecw.msi</a>	2014-12-14 21:15:57	2594 kB	Installer for the GDAL ECW plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py3.3.msi</a>	2014-12-14 21:15:48	416 kB	Installer for the GDAL python bindings (requires to install the GDAL core)
<a href="#">gdal-111-1500-mrsid.msi</a>	2014-12-14 21:15:59	2641 kB	Installer for the GDAL MrSID plugin (must be installed to the same directory as the GDAL core)
<a href="#">gdal-111-1500-core.msi</a>	2014-12-14 21:15:56	19846 kB	Generic installer for the GDAL core components
<a href="#">mapserver-6.4.1-1500-core.msi</a>	2014-12-14 21:16:07	22314 kB	MapServer installer with IIS registration support
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<a href="#">gdal-111-1500-filegdb.msi</a>	2014-12-14 21:15:57	1876 kB	Installer for the GDAL FileGDB plugin (must be installed to the same directory as the GDAL core)
<a href="#">GDAL-1.11.1.win32-py2.7.msi</a>	2014-12-14 21:15:47	432 kB	Installer for the GDAL python bindings (requires to install the GDAL core)

6. Download the Python bindings and install them.

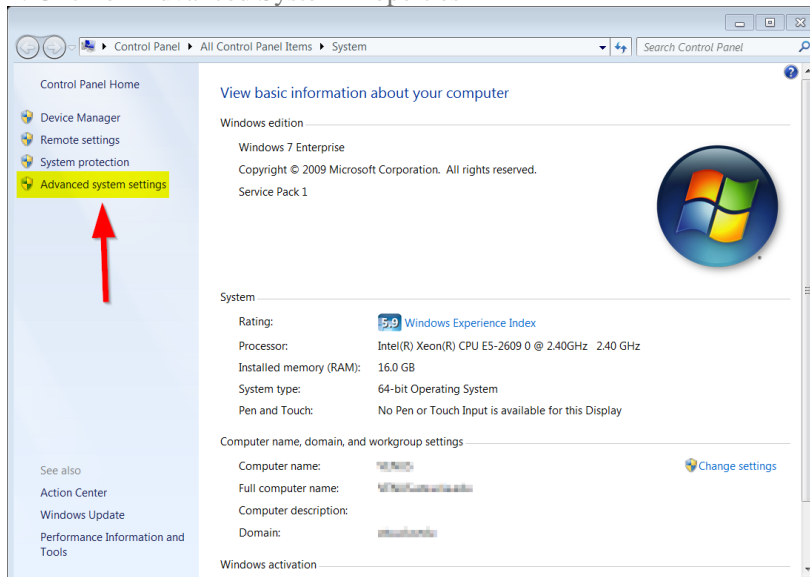
## Step 3: Adding Path Variables:

We need to tell Windows system where the GDAL installations are located, so we need to add some system variables.

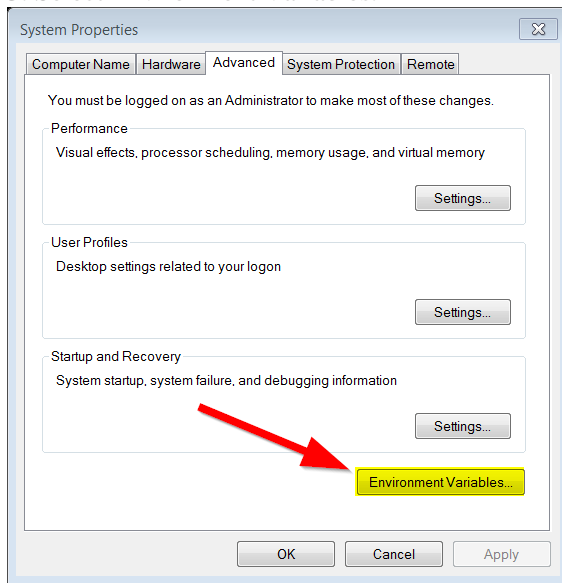
1. Right click on “Computer” on the desktop and go to “Properties”:



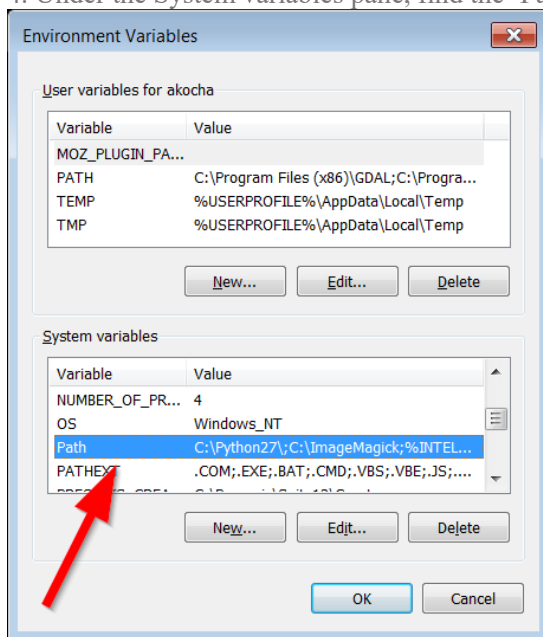
2. Click on Advanced System Properties



### 3. Select Environment Variables.



### 4. Under the System variables pane, find the 'Path' variable, then click on Edit.



### 5. Go to the end of the box and copy and paste the following:

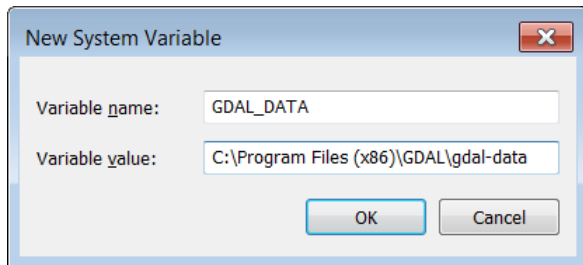
```
;C:\Program Files (x86)\GDAL
```

*Note: For 64-bit GDAL installations you would simply remove the (x86) after Program Files.*

6. In the same System variables pane, click on “New” and then add the following in the dialogue box:

Variable name: GDAL\_DATA

Variable value: C:\Program Files (x86)\GDAL\gdal-data



7. Click “OK”

8. Add one more new variable by clicking “New...”

10. Add the following in the dialogue box:

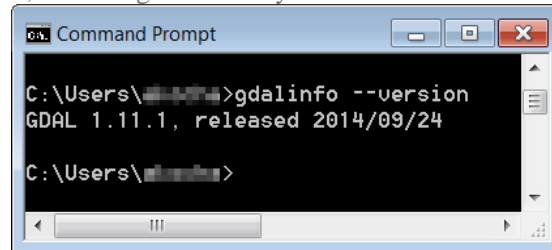
Variable name: GDAL\_DRIVER\_PATH

Variable value: C:\Program Files (x86)\GDAL\gdalplugins

11. Click “OK”

## Step 4: Testing the GDAL install

1. Open the Windows command line, by going to the Start Menu -> Run -> Type in cmd and press Enter.
2. Type in `gdalinfo --version`
3. Press Enter.
4. If you get the following result, then congratulations your GDAL installation worked smoothly!



```
Command Prompt

C:\Users\>gdalinfo --version
GDAL 1.11.1, released 2014/09/24

C:\Users\>
```