Guide to install Augmented Maps on Windows
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Tested install on Windows 7, XP, 32 bit OS
Versions of the installers/packages used
  * ms4w 3.0.1
  * Postgres 9.0.1
  * Python 2.6.2
  * OpenLayers 2.8
  * MapFish 1.1

Setting up machine for deployment:-

1. Install ms4w, picking the exe from Map server downloads page.
   * ms4w is designed to be installed in the root of a drive, like D:\ms4w
   * In windows 7, XP, there are problems with Permissions if we install ms4w in C drive.

2. Installing Apache
   * Start your MS4W Apache Web Server by running /ms4w/apache-install.bat (at the command line or by double-clicking it). This file installs Apache as a Windows service (called "Apache Web Server") so that it starts whenever your machine is restarted
   * To test that Apache is running properly, open your Web browser and find your local host Web service by entering http://localhost/
   NOTE for Win95,98,ME users:
     * You will not be able to install Apache as a service, so instead you will have to manually start Apache each time, by clicking on /ms4w/Apache/bin/httpd.exe. An empty DOS window will open, which means Apache is running. To stop Apache you will have to close this empty DOS window.
   ** Notes for Microsoft Vista **
     * In order to run the apache-install.bat file, you must do the following:
       1. In Windows Explorer, goto the location of your cmd.exe file (C:/Windows/System32)
       2. Right-click the cmd.exe executable and choose `Run as Administrator`
       3. Navigate to your ms4w folder in the command prompt window and run apache-install.bat

3. MapScript configuration
  * Unpack ``/ms4w/Apache/cgi-bin/mapscript/python/mapscript*win32.zip`` in a safe location
  * In the directory structure that results from the above step, navigate to ``\Python-2.6.2\Lib\site-packages``
  * You should find three files there:
     * _mapscript.pyd
     * mapscript.py
     * mapscript.pyc
  * Copy the three files into the site-packages directory of your Python 2.6.x installation (eg., ``C:\Python26\Lib\site-packages``)
  * Add ``<drive_letter>:\ms4w\Apache\cgi-bin`` to your system's PYTHONPATH environment variable.

4. Postgres installer can be downloaded from the Postgres site.
  * In windows 7, XP, there are problems with Permissions/UAC if we install ms4w in C drive.
  * Installing to some other drive easier, though by removing the permissions issue, one can install Postgres in C drive as well
  * Install Postgres with default options
  * After the installation of Postgres, a wizard will be launched to choose the packages on top of Postgres. Choose Postgis.
  * We need to speifically give permissions to use geometry_column, spatial_ref_sys columns
  * Open psql command prompt and grant all users permissions to insert, update geometry_column, spatial_ref_sys columns
    * \c template_postgis
    * GRANT ALL ON geometry_columns TO PUBLIC;
    * GRANT ALL ON spatial_ref_sys TO PUBLIC;

5. Configuration changes in Apache, Php, Postgres
  * Enable mod_rewrite in Apache, configuration file is located at ms4w//Apache/conf/httpd.conf
    * We need to uncomment the statement to load module mod_rewrite
  * Enable php_pgsql.dll, php_pdo_pgsql.dll in php.ini, located at ms4w/Apache/cgi-bin/php.ini
    * We need to uncomment the commented statements to Load these modules

6. Install Openlayers
  * Download the zip of latest release of OpenLayers from the website
  * Unzip it in ms4w/Apache/htdocs/ or Keep it in a different location and add this configuration in httpd.conf

```
        Alias /openlayers "<path to OpenLayers directory>"
        <Directory "<path to OpenLayers directory>">
                AllowOverride All
                Options Indexes FollowSymLinks Multiviews
                Order allow,deny
                Allow from all
        </Directory>
```

  * To confirm OpenLayers is installed open browser on server and go to http://localhost/openlayers/. The contents of the OpenLayers directory should be displayed

7. Install MapFish
  * Download MapFish 1.1 from the website
  * Unzip it in ms4w/Apache/htdocs/ or Keep it in a different location and add this configuration in httpd.conf

```
        Alias /MapFish "<path to MapFish directory>"
                <Directory "<path to MapFish directory>">
                AllowOverride All
                Options Indexes FollowSymLinks Multiviews
                Order allow,deny
                Allow from all
        </Directory>
```

  * To confirm MapFish is installed open browser on server and go to http://localhost/MapFish/. The contents of the MapFish directory should be displayed

8. Allow access to cgi-bin from apache

```
        <Directory "D:/ms4w/Apache/cgi-bin/">
                AllowOverride None
                Options +ExecCGI +Indexes
                Order allow,deny
                Allow from all
        </Directory>
```

9. Add projection for Google Maps to projection file.
    * Append the following line to ms4w\proj\nad\epsg

```
      #added for google
      <900913> +proj=merc +a=6378137 +b=6378137 +lat_ts=0.0 +lon_0=0.0 +x_0=0.0 +y_0=0 +k=1.0 +units=m +nadgrids=@null +no_defs <>
```

10. After making changes in the configuration files of Apache or php, to see the impacts, we need to restart the Apache web server.

Deployment, checking out source from GIT:

1. Checkout code from GIT repository
    * Inorder to checkout code from GIT, install a GIT client
    * Command to run in GIT client
      * git clone git@github.com:strandls/augmentedmaps.git
2. Configuration
   * Inside the augmentedmaps directory, Open the 'Makefile' in a text editor and change the following parameters:

```
        SOURCE_PATH = location of downloaded augmentedmaps directory
        DEPLOY_PATH = location where to install augmented maps
        BACKUP_PATH = location where backup of the old installation will be made
        DB_USERNAME = database user name
```

```
        DB_PASSWORD = database password
        DATABASE_NAME = database name

   * Save the 'Makefile' after making the changes. Use '\\' as path seperator.
3. Install.
    * Make sure that make utility is available for command prompt
    * After making the apropriate configuration changes as specified above. Run
the following commands from command prompt.
    * To make backup of older installation.
        make backup
        * This will create backup of existing installation in the BACKUP_PATH
specified in the 'Makefile'
    * To setup and populate database for Augumented Maps. This should not be
required if the database is already setup for Augmented Maps.
        * make setupdb
    * To deploy the files,
        * make deploy
        * Current configuration in Makefile tries to set the Permissions,
assuming Linux machine
        * Either those command can be modified in the Make file, before running
make deploy, or Permissions can be set explicitly
    *   After all the troops have been deployed successfully, generate maps.
        * make generate_maps
        * This will generate map files and place them in MAP_DATA directory
(specified in Makefile)

4. Modifying Google maps API key
    * Get google Maps API key from google, depending on the website. For
localhost, register for http://localhost
    * Get the key and replace the existing key in includemap.js
    * Instances of the URL of the website also needs to be replaced in
includemap.js

5. Allow overriding by configuring in apache.
    * Adding the following lines in httpd.conf, enables .htaccess to override
the configurations specified in Apache configuration.
         <Directory "D:\ms4w\Apache\htdocs\augmentedmaps">
             AllowOverride All
             Options Indexes FollowSymLinks Multiviews
             Order allow,deny
             Allow from all
         </Directory>

6. Edit the .htaccess file inside the deployed folder
  * Edit the .htaccess, uncomment and change the following line
    # RewriteBase /
        To
    RewriteBase /augmentedmaps
  * This allows access to the pages stored in database.

7. Path Changes for windows
  * Open <deployment directory>/sites/all/modules/map/map.js
  * Path's specified in map.js file should be modified to use \\ as path
seperator,
  * Mapserver URL needs to be modified to mapserver.exe.

8. Ensure that the db_url in sites/default/settings.php is pointing to the right
database.
```