

# Using PostGIS/PostgreSQL for Managing CAD and GIS Data

This white paper describes how to install, configure, and use a PostGIS database with AutoCAD® Map 3D software and Autodesk MapGuide® Enterprise software.

Today's users of geographic information systems (GIS) have access to geospatial data in a variety of relational databases and file formats and via an increasing number of web-based map services, which calls for seamless data access in native formats and platforms. Without it, users face the inefficiency and inaccuracies of having to translate various data sources into the format supported by their GIS application to provide a collective "single view" of the data. One such commonly utilized geospatial data option available today to store spatial and non-spatial data is the open source PostGIS/PostgreSQL database software.

Incorporated into AutoCAD Map 3D and also available as a stand-alone open source technology for developers, OSGeo FDO Data Access Technology helps increase productivity and save time by enabling users to work more seamlessly on a variety of spatial and non-spatial databases and file formats natively, minimizing the need for translation and risk of data loss. AutoCAD Map 3D and Autodesk MapGuide Enterprise provide robust connectivity to PostGIS/PostgreSQL through an *open source FDO provider*<sup>1</sup> available on [fdo.osgeo.org](http://fdo.osgeo.org).

With this document you should be able to connect PostGIS/PostgreSQL data through AutoCAD Map 3D and Autodesk MapGuide Enterprise. This document also describes the steps right from installation of PostGIS/PostgreSQL to publishing the data on the web.

## About PostGIS

PostGIS adds support for geographic objects to the PostgreSQL object-relational database. In effect, PostGIS "spatially enables" the PostgreSQL server, allowing it to be used as a backend spatial database for geographic information systems (GIS). PostGIS

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**Autodesk®**

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<sup>1</sup> The FDO Provider for PostGIS available from the Open Source Geospatial Foundation (OSGeo) is not developed and/or tested by Autodesk as of the 2010 version of products.

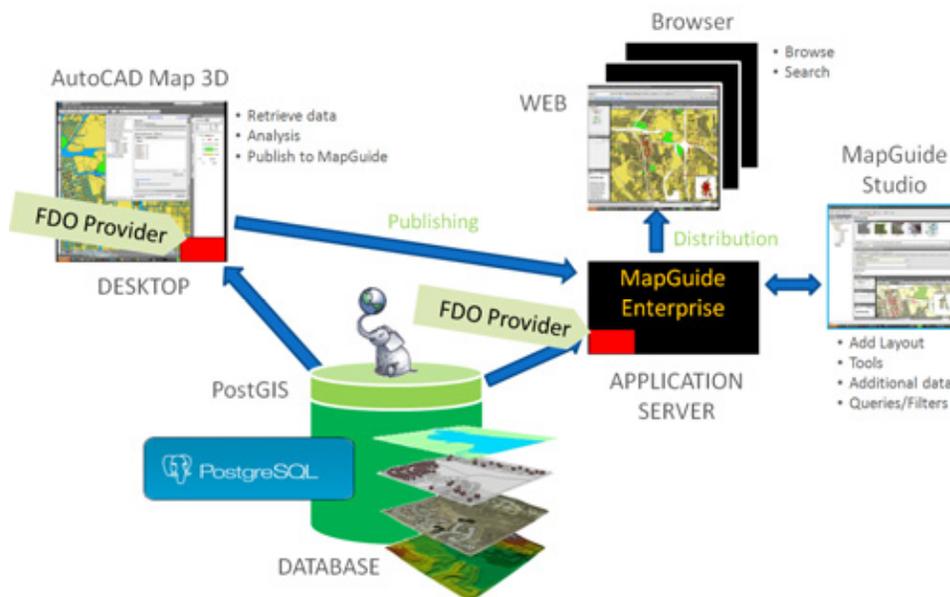
## Using PostGIS/PostgreSQL for managing CAD and GIS data

follows the OGC “Simple Features Specification for SQL” and is compliant with the “Types and Functions” profile.

PostGIS has been developed by Refrations Research as a project in open source spatial database technology. PostGIS is released under the GNU General Public License. It has basic topology support, data validation, coordinate transformation, programming APIs, and much more.

## Technical Architecture

The base architecture for AutoCAD Map 3D, Autodesk MapGuide, and the database is as follows:

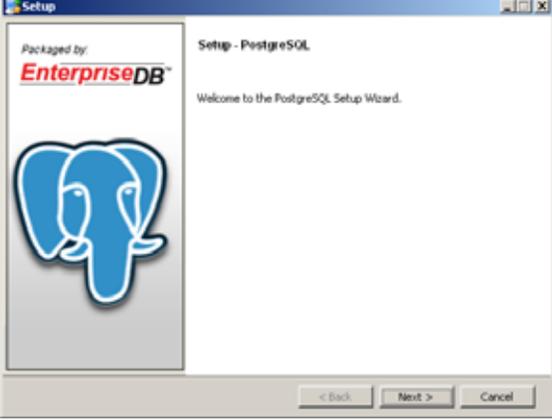
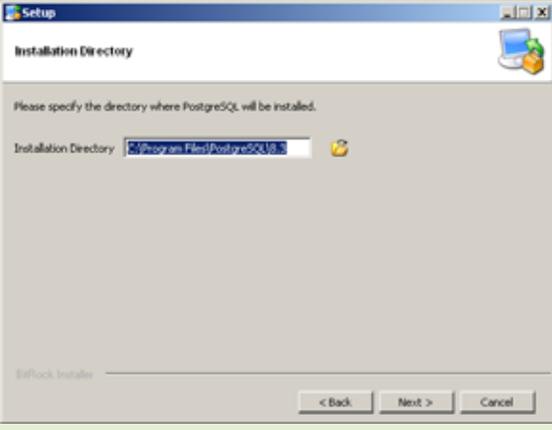
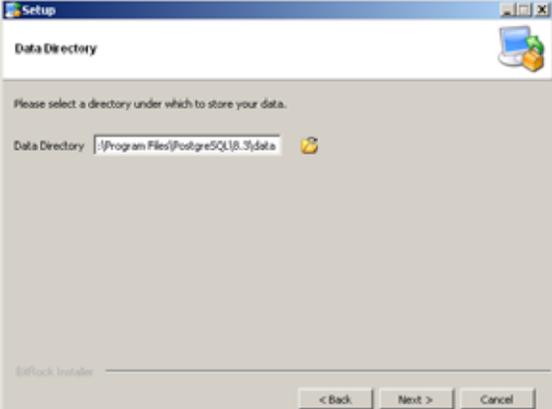


## Prerequisites:

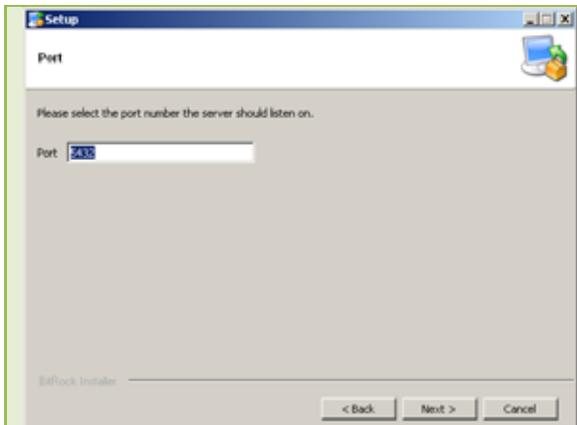
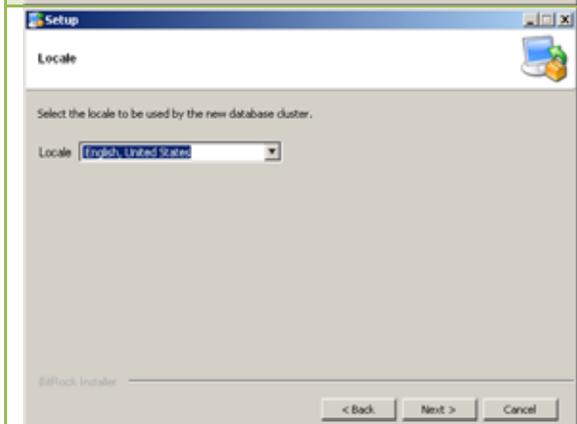
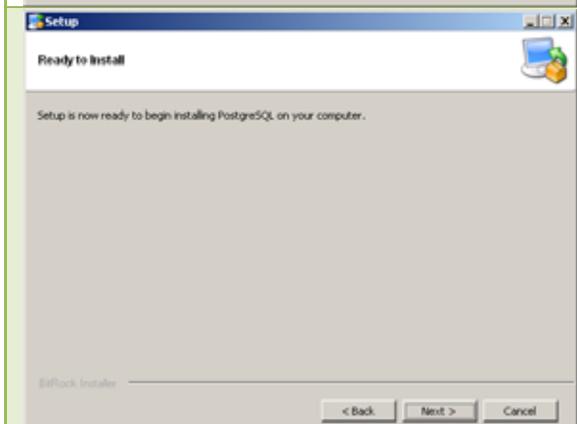
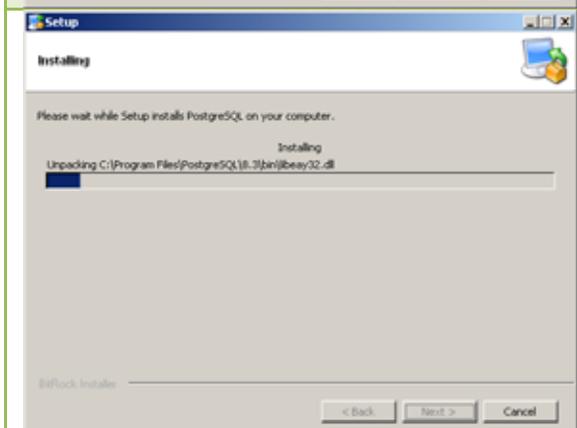
You will need the following installers along with an installed copy of AutoCAD Map 3D, Autodesk MapGuide Enterprise, and Autodesk MapGuide® Studio software:

1. PostGRESQL8.3.7-1:  
[www.enterprisedb.com/getfile.jsp?fileid=586](http://www.enterprisedb.com/getfile.jsp?fileid=586)  
(Unzip this folder to get the installer.)
2. PostGIS 1.3.6-1:  
[postgis.refrations.net/download/postgis-1.3.6.tar.gz](http://postgis.refrations.net/download/postgis-1.3.6.tar.gz)  
(Unzip this folder to get the installer.)
3. PostGIS FDO:  
[fdo.osgeo.org/content/fdo-340-downloads](http://fdo.osgeo.org/content/fdo-340-downloads)  
(Unzip this folder to get the windows binaries. Additional DLLs are required to run this FDO properly.)

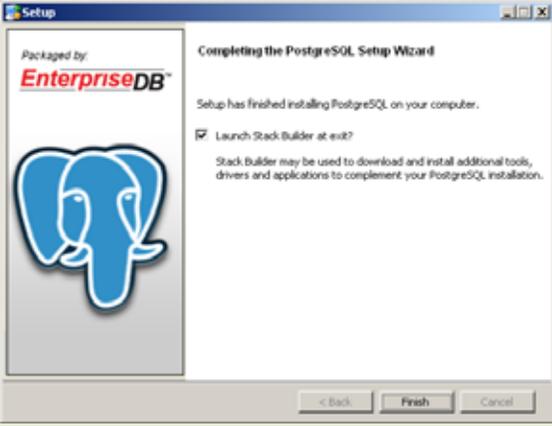
**Installing PostgreSQL 8.3:**

 postgresql-8.3.7-1-windows.exe	Double-click to install PostgreSQL-8.3.7-1.
 <p>The screenshot shows the 'Setup - PostgreSQL' window. On the left, it says 'Packaged by: EnterpriseDB' with the blue elephant logo. The main text reads 'Welcome to the PostgreSQL Setup Wizard.' At the bottom, there are buttons for '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	Click Next > to follow the wizard instructions to install EnterpriseDB PostgreSQL version 8.3.
 <p>The screenshot shows the 'Installation Directory' screen. It asks the user to specify the directory where PostgreSQL will be installed. The text box contains the default path: 'C:\Program Files\PostgreSQL\8.3'. At the bottom, there are buttons for '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	Choose the default installation directory to install the application. Click Next >.
 <p>The screenshot shows the 'Data Directory' screen. It asks the user to select a directory under which to store their data. The text box contains the default path: 'C:\Program Files\PostgreSQL\8.3\data'. At the bottom, there are buttons for '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	Choose the data directory to store the database files. Click Next >.

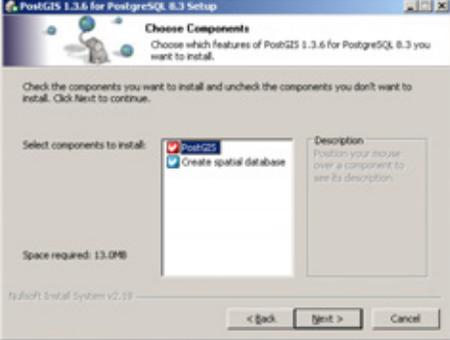
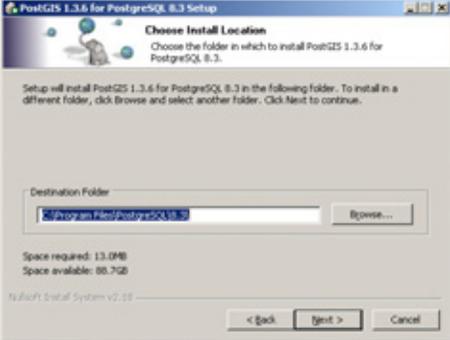
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 <p>The screenshot shows the 'Port' dialog box in the PostgreSQL Setup wizard. The title bar reads 'Setup'. The main heading is 'Port'. Below the heading, it says 'Please select the port number the server should listen on.' There is a text input field labeled 'Port' containing the number '5432'. At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	<p>5432 is the Port number that is assigned by default for PostgreSQL. Click Next &gt;.</p>
 <p>The screenshot shows the 'Locale' dialog box in the PostgreSQL Setup wizard. The title bar reads 'Setup'. The main heading is 'Locale'. Below the heading, it says 'Select the locale to be used by the new database cluster.' There is a dropdown menu labeled 'Locale' with 'English_United_States' selected. At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	<p>Choose the language Locale English United States.</p>
 <p>The screenshot shows the 'Ready to Install' dialog box in the PostgreSQL Setup wizard. The title bar reads 'Setup'. The main heading is 'Ready to Install'. Below the heading, it says 'Setup is now ready to begin installing PostgreSQL on your computer.' At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	<p>Click Next &gt;.</p>
 <p>The screenshot shows the 'Installing' dialog box in the PostgreSQL Setup wizard. The title bar reads 'Setup'. The main heading is 'Installing'. Below the heading, it says 'Please wait while Setup installs PostgreSQL on your computer.' There is a progress bar and a status line that reads 'Installing' and 'Unpacking C:\Program Files\PostgreSQL\8.3\bin\libeay32.dll'. At the bottom, there are three buttons: '&lt; Back', 'Next &gt;', and 'Cancel'.</p>	<p>Click Next &gt; to install.</p>

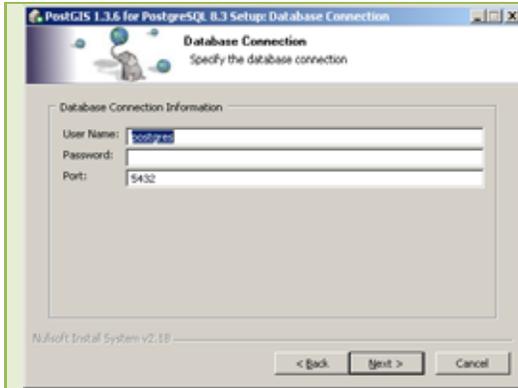
Using PostGIS/PostgreSQL for managing CAD and GIS data

	<p>Installation is complete. Click the Finish button. Uncheck Launch Stack Builder if you do not want to start it and get more updates. Note: It is suggested that you <i>not</i> start it and get plug-ins for now.</p>
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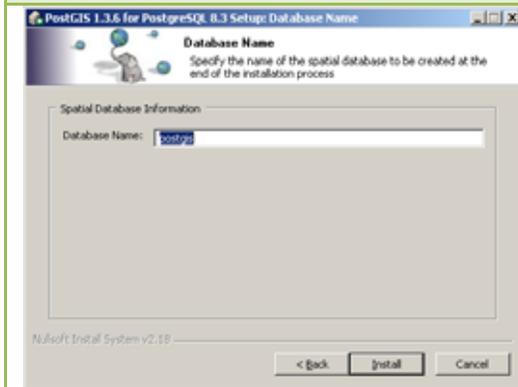
Installing PostGIS 1.3.6-1:

 <p>postgis-pg83-setup-1.3.6-1.exe</p>	<p>Double-click postgis-pg83-setup-1.3.6-1.exe.</p>
	<p>Read through the License Agreement. To accept the agreement, click I Agree.</p>
	<p>Make sure you have checked the PostGIS and Create Spatial Database options. Click Next &gt;.</p>
	<p>Accept the default path C:\Program files\PostgreSQL\8.3\ Click Next &gt;.</p>

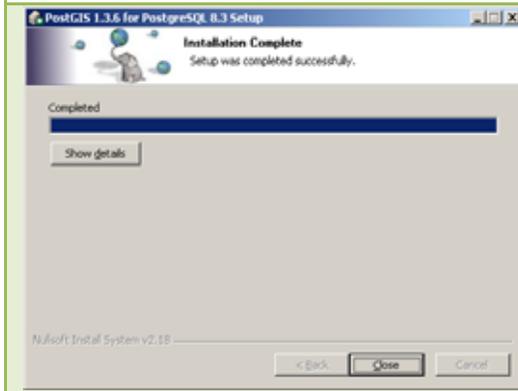
## Using PostGIS/PostgreSQL for managing CAD and GIS data



Provide username and password:  
Username: **postgres**  
Password: <Windows login> *or* your password,  
for example **mypassword123**.  
(Provide your widows login password.)  
Click Next >.

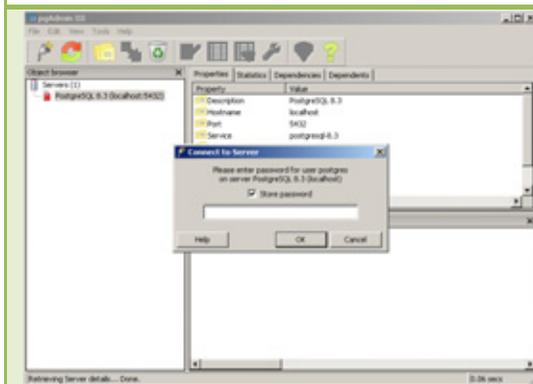


Database name: **postgis**  
By default there will be a postgres database, so  
create one more for PostGIS to store geometry  
data.  
Click Install.



Click Close to complete the PostGIS 1.3.6  
installation.

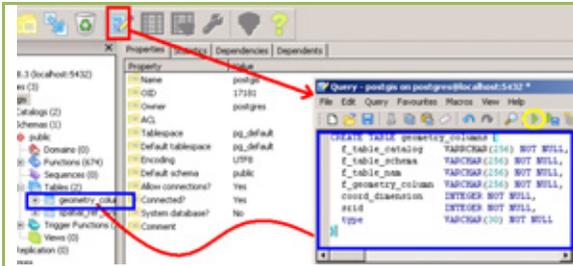
## Loading Spatial/SHP Data to PostGIS



### PostgreSQL Admin III:

Go to *Start>Programs>PostgreSQL  
8.3>pgAdminIII*.  
Select the PostgreSQL 8.3 (localhost:5432) server  
and right-click.  
Click Connect. You will be connected to the  
database.  
You can now find the “postgres” database in it.

## Using PostGIS/PostgreSQL for managing CAD and GIS data



### Create a table in the databases to store geometry data in PostGIS:

Open pgAdminIII and start the server.  
 Open PostGIS database  
 Click SQL button (on top).  
 Use the procedure below to create a new table called geometry\_columns with specific columns in it.

```
CREATE TABLE geometry_columns (
  f_table_catalog  VARCHAR(256) NOT NULL,
  f_table_schema   VARCHAR(256) NOT NULL,
  f_table_name     VARCHAR(256) NOT NULL,
  f_geometry_column VARCHAR(256) NOT NULL,
  coord_dimension  INTEGER NOT NULL,
  srid              INTEGER NOT NULL,
  type             VARCHAR(30) NOT NULL
)
```

### Create table procedure:

Copy the procedure and paste it in the SQL window. Click the green Run button to execute the procedure.

You will find the table gets created in the database.

### Load SHP through shp2pgsql loader.

Shp2pgsql is an inbuilt plug-in that gets installed along with PostGIS 1.3.6 and can be used to load the spatial SHP data to PostGIS.

#### Syntax:

```
C:\Program Files\PostgreSQL\8.3\bin>shp2pgsql -I -D <SHP file path> | psql <Postgre database name> postgres
```

For example:

```
C:\Program Files\PostgreSQL\8.3\bin>shp2pgsql -I -D C:\SHPData\Zoning\Zoning.shp zoning | psql postgres
```

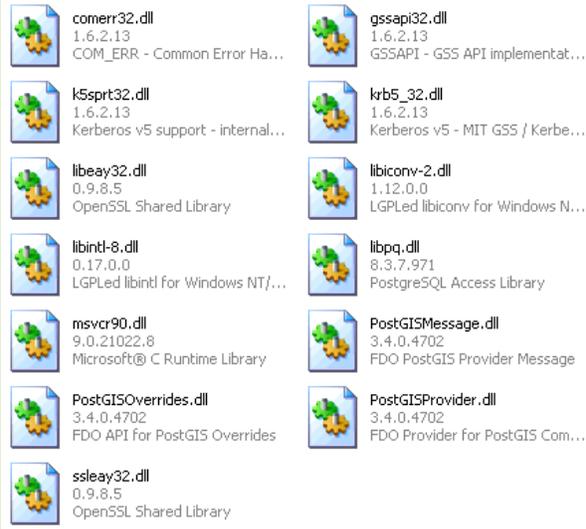
<Press Enter>

```
C:\Program Files\PostgreSQL\8.3\bin>shp2pgsql -I -D C:\SHPData\Zoning\Zoning.shp zoning | psql postgres
shapetype: Polygon
Postgis type: MULTIPOLYGON[2]
BEGIN
NOTICE: CREATE TABLE will create implicit sequence "zoning_gid_seq" for serial column "zoning_gid"
NOTICE: CREATE TABLE / PRIMARY KEY will create implicit index "zoning_pkey" for table "zoning"
CREATE TABLE
      addgeometrycolumn
-----
 public.zoning.the_geom SRID:-1 TYPE:MULTIPOLYGON DIMS:2
(1 row)
CREATE INDEX
COMMIT
```

Hit <Enter> to load the data

This example uses the Zoning.shp file found in the sample data folder of the AutoCAD Map 3D installation, but you may use any SHP file and copy it to the C:\SHPData folder or use the path where your data files are located.

**Configuring AutoCAD Map 3D 2010 for PostGIS FDO:**



Copy and paste the DLLs listed below into C:\Program Files\AutoCAD Map 3D 2010\FDO\bin and update the providers.xml file to register the PostGIS FDO Provider.

The following is a list of required DLLs: comerr32.dll, gssapi32.dll, k5sprt32.dll, krb5\_32.dll, libeay32.dll, libiconv-2.dll, libintl-8.dll, libpq.dll, msvcr90.dll, ssleay32.dll, *PostGISMessage.dll*, *PostGISProvider.dll*, *PostGISOverrides.dll*

Entries in italics can be found in the FDO Provider windows binary download on the FDO website at [fdo.osgeo.org/content/fdo-340-downloads](http://fdo.osgeo.org/content/fdo-340-downloads).

The remaining DLLs can be found in the PostGIS bin folder.

```
<FeatureProvider>
<Name>OSGeo.PostGIS.3.4</Name>
<DisplayName>Fournisseur OSGeo FDO pour PostGIS </DisplayName>
<Description>Accès en lecture/écriture à une banque de données de type PostGIS.</Description>
<IsManaged>False</IsManaged>
<Version>3.4.0.0</Version>
<FeatureDataObjectsVersion>3.4.0.0</FeatureDataObjectsVersion>
<LibraryPath>PostGISProvider.dll</LibraryPath>
</FeatureProvider>
```

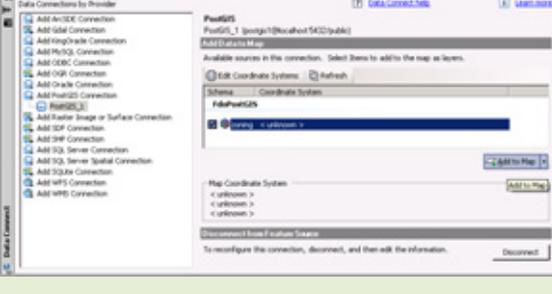
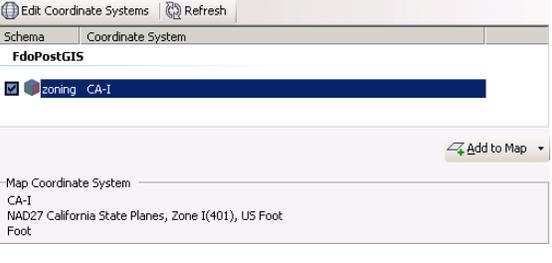
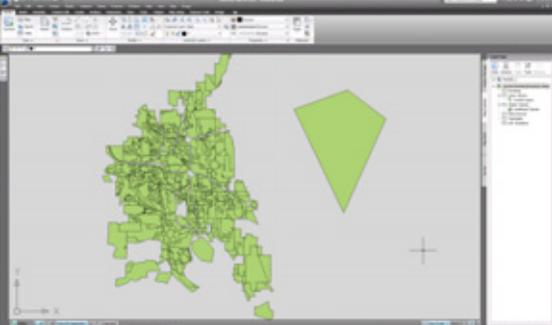
Open providers.xml from C:\Program Files\AutoCAD Map 3D 2010\FDO\bin and add the xml snippet to the left at the end just before the final </FeatureProviderRegistry> tag and save the file.



Assign CA-I or proper coordinate system to Map 3D.

Go to Add Data in the task pane and verify all the existing FDOs are loaded along with PostGIS. Click it and provide the details as below:

## Using PostGIS/PostgreSQL for managing CAD and GIS data

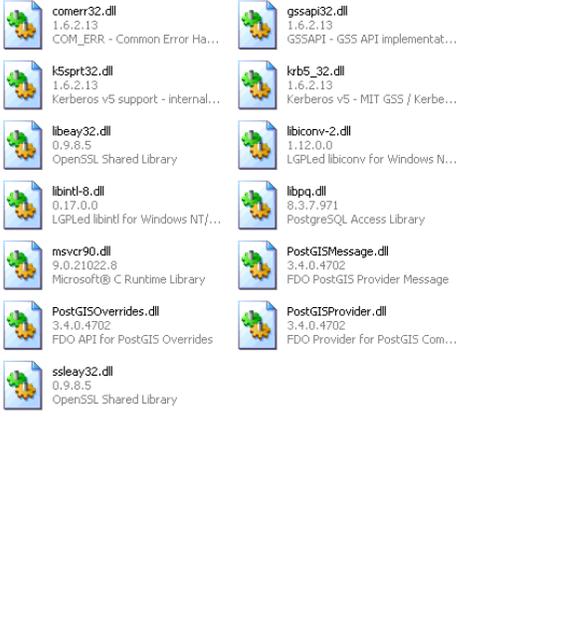
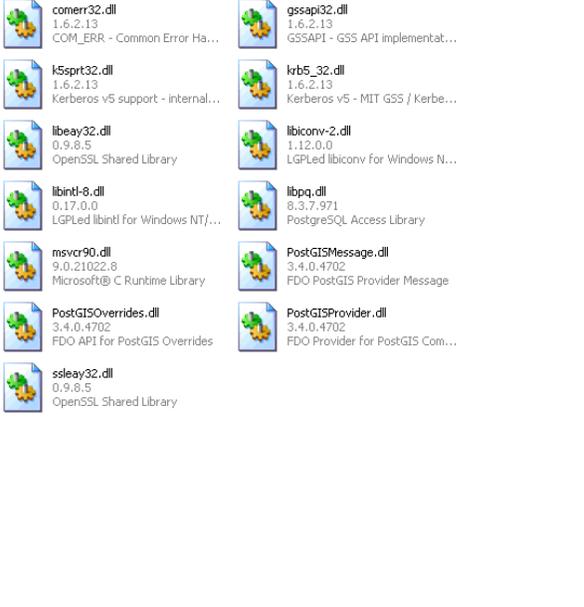
	<p>Connection: Any name for the connection.          Username: <b>postgres</b>          Password: <b>&lt;as defined&gt;</b>          Service: database@server:port          For example: postgis1@localhost:5432          Click Login and Connect.</p>
	<p>Select the desired data in the data list.</p>
	<p>Make sure you have assigned proper coordinate system in Map 3D and to the data to avoid errors.  <b>CA-I</b>          Select the data you had added to PostgreSQL and click Add to Map.</p>
	<p>The data will be added to Autodesk Map 3D 2010. Play with the connection data by creating themes and queries.</p>

## Configuring Autodesk MapGuide Enterprise2010 and Autodesk MapGuide Studio 2010 for PostGIS FDO:

A great advantage of the FDO technology is that the same files can be configured for AutoCAD Map 3D as well as for Autodesk MapGuide Enterprise, the web based application platform. In Autodesk MapGuide Enterprise, FDO configuration needs to be done on the Autodesk MapGuide Server side as well as on the Autodesk MapGuide Studio side.

Note: Do not copy and paste the providers.xml and all the FDOs from Autodesk MapGuide Server to Autodesk MapGuide Studio or from AutoCAD Map 3D to Autodesk MapGuide Enterprise. They all need to be configured separately. Make sure Autodesk MapGuide Enterprise 2010 service is stopped during this configuration.

## Using PostGIS/PostgreSQL for managing CAD and GIS data

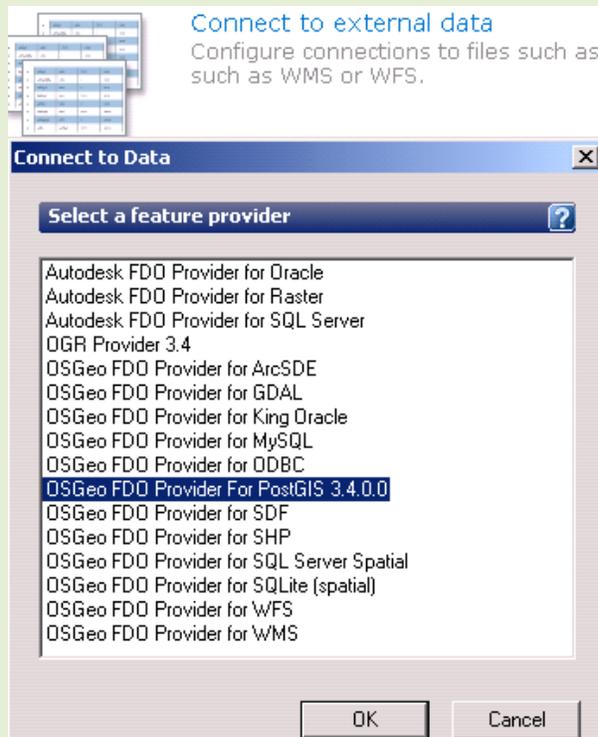
 <p>comerr32.dll 1.6.2.13 COM_ERR - Common Error Ha...</p> <p>k5sprt32.dll 1.6.2.13 Kerberos v5 support - internal...</p> <p>libeay32.dll 0.9.8.5 OpenSSL Shared Library</p> <p>libintl-8.dll 0.17.0.0 LGPLed libintl for Windows NT/...</p> <p>msvc90.dll 9.0.21022.8 Microsoft® C Runtime Library</p> <p>PostGISOverrides.dll 3.4.0.4702 FDO API for PostGIS Overrides</p> <p>ssleay32.dll 0.9.8.5 OpenSSL Shared Library</p> <p>gssapi32.dll 1.6.2.13 GSSAPI - GSS API implementat...</p> <p>krb5_32.dll 1.6.2.13 Kerberos v5 - MIT GSS / Kerbe...</p> <p>libiconv-2.dll 1.12.0.0 LGPLed libiconv for Windows N...</p> <p>libpq.dll 8.3.7.971 PostgreSQL Access Library</p> <p>PostGISMessage.dll 3.4.0.4702 FDO PostGIS Provider Message</p> <p>PostGISProvider.dll 3.4.0.4702 FDO Provider for PostGIS Com...</p>	<p><b>Configure Autodesk MapGuide Enterprise:</b> Go to C:\Program Files\Autodesk\MapGuideEnterprise2010\Server\Bin\Fdo and paste all the required PostGIS FDO DLLs mentioned below:</p> <p>comerr32.dll, gssapi32.dll, k5sprt32.dll, krb5_32.dll, libeay32.dll, libiconv-2.dll, libintl-8.dll, libpq.dll, msvc90.dll, ssleay32.dll, <i>PostGISMessage.dll, PostGISProvider.dll, PostGISOverrides.dll</i></p> <p>Entries in italics can be found in the FDO Provider windows binary download on the FDO website at <a href="http://fdo.osgeo.org/content/fdo-340-downloads">fdo.osgeo.org/content/fdo-340-downloads</a>.</p> <p>The remaining DLLs can be found in the PostGIS bin folder.</p>
<pre>&lt;FeatureProvider&gt; &lt;Name&gt;OSGeo.PostGIS.3.4&lt;/Name&gt; &lt;DisplayName&gt;Fournisseur OSGeo FDO pour PostGIS &lt;/DisplayName&gt; &lt;Description&gt;Accès en lecture/écriture à une banque de données de type PostGIS.&lt;/Description&gt; &lt;IsManaged&gt;False&lt;/IsManaged&gt; &lt;Version&gt;3.4.0.0&lt;/Version&gt; &lt;FeatureDataObjectsVersion&gt;3.4.0.0&lt;/FeatureDataObjectsVersion&gt; &lt;LibraryPath&gt;PostGISProvider.dll&lt;/LibraryPath&gt; &lt;/FeatureProvider&gt;</pre>	<p>Open providers.xml from C:\Program Files\Autodesk\MapGuideEnterprise2010\Server\Bin\Fdo and add the xml snippet to the left at the end just before the final <code>&lt;/FeatureProviderRegistry&gt;</code> tag and save the file.</p>
 <p>comerr32.dll 1.6.2.13 COM_ERR - Common Error Ha...</p> <p>k5sprt32.dll 1.6.2.13 Kerberos v5 support - internal...</p> <p>libeay32.dll 0.9.8.5 OpenSSL Shared Library</p> <p>libintl-8.dll 0.17.0.0 LGPLed libintl for Windows NT/...</p> <p>msvc90.dll 9.0.21022.8 Microsoft® C Runtime Library</p> <p>PostGISOverrides.dll 3.4.0.4702 FDO API for PostGIS Overrides</p> <p>ssleay32.dll 0.9.8.5 OpenSSL Shared Library</p> <p>gssapi32.dll 1.6.2.13 GSSAPI - GSS API implementat...</p> <p>krb5_32.dll 1.6.2.13 Kerberos v5 - MIT GSS / Kerbe...</p> <p>libiconv-2.dll 1.12.0.0 LGPLed libiconv for Windows N...</p> <p>libpq.dll 8.3.7.971 PostgreSQL Access Library</p> <p>PostGISMessage.dll 3.4.0.4702 FDO PostGIS Provider Message</p> <p>PostGISProvider.dll 3.4.0.4702 FDO Provider for PostGIS Com...</p>	<p><b>Configure Autodesk MapGuide Studio:</b> Open C:\Program Files\Autodesk\MapGuideStudio2010\FDO folder and paste all the required PostGIS FDO DLLs mentioned below:</p> <p>comerr32.dll, gssapi32.dll, k5sprt32.dll, krb5_32.dll, libeay32.dll, libiconv-2.dll, libintl-8.dll, libpq.dll, msvc90.dll, ssleay32.dll, <i>PostGISMessage.dll, PostGISProvider.dll, PostGISOverrides.dll</i></p> <p>Entries in italics can be found in the FDO Provider windows binary download on the FDO website at <a href="http://fdo.osgeo.org/content/fdo-340-downloads">fdo.osgeo.org/content/fdo-340-downloads</a>.</p> <p>The remaining DLLs can be found in the PostGIS bin folder.</p>

```
<FeatureProvider>
<Name>OSGeo.PostGIS.3.4</Name>
<DisplayName>Fournisseur OSGeo FDO pour
PostGIS </DisplayName>
<Description>Accès en lecture/écriture à une
banque de données de type
PostGIS.</Description>
<IsManaged>False</IsManaged>
<Version>3.4.0.0</Version>
<FeatureDataObjectsVersion>3.4.0.0</Featu
reDataObjectsVersion>
<LibraryPath>PostGISProvider.dll</LibraryP
ath>
</FeatureProvider>
```

Open providers.xml from *C:\Program Files\Autodesk\MapGuideStudio2010\FDO* and add the xml snippet to the left at the end just before the final `</FeatureProviderRegistry>` tag and save the file.



Now start Autodesk MapGuide Enterprise 2010 service, which was stopped previously before this configuration step.



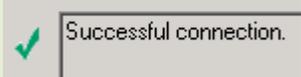
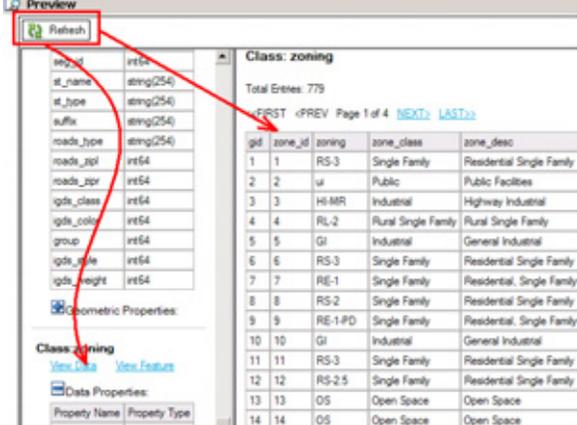
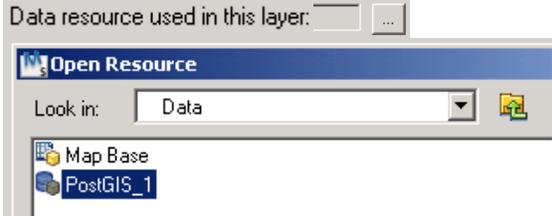
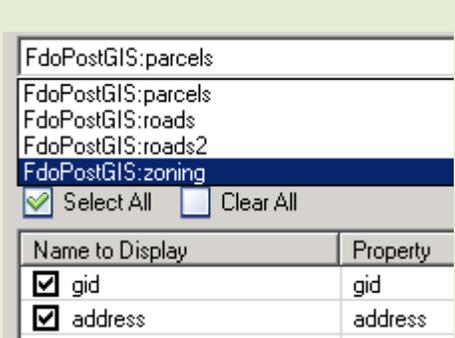
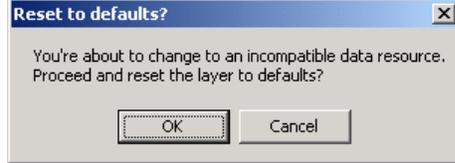
Start MapGuide Studio and click Connect to External Data. Now you should see the PostGIS Provider listed with the other providers available. You can see all the OSGEO providers can be configured with AutoCAD Map 3D as well as with Autodesk MapGuide Enterprise with this common process.

**Using PostGIS data in Autodesk MapGuide Studio:**

Property	Translated Nam	Value
Usenam	Username	postgres
Passwor	Password	Changeme1
Service	Service	postgis1@localhost:5432
DataStor	DataStore	public

Click OK and add the credentials for the PostGIS database.

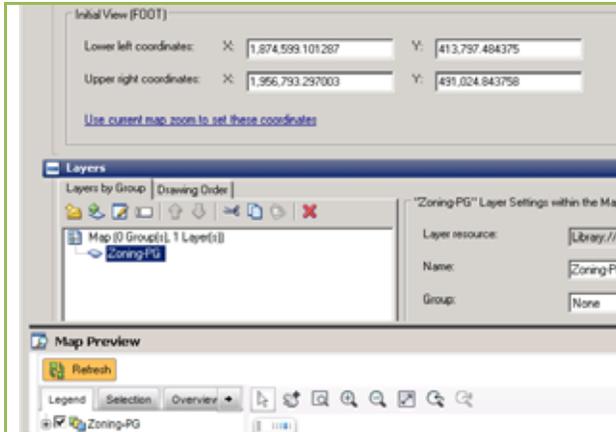
Using PostGIS/PostgreSQL for managing CAD and GIS data

	<p>Scroll down and click Test Connection.</p>
	<p>You should get the successful connection message</p>
	<p>Click Refresh and then view the data in the PostGIS connection.</p> <p>Save the data connection and create a layer by using this data connection.</p>
	<p>Right-click the repository folder and create a new layer.</p>
	<p>Click the ellipsis and provide the data connection as PostGIS.</p>
	<p>Select FDOPostGIS:Zoning in the Feature Data Setup.</p>
	<p>Click OK to reset the layer defaults.</p>

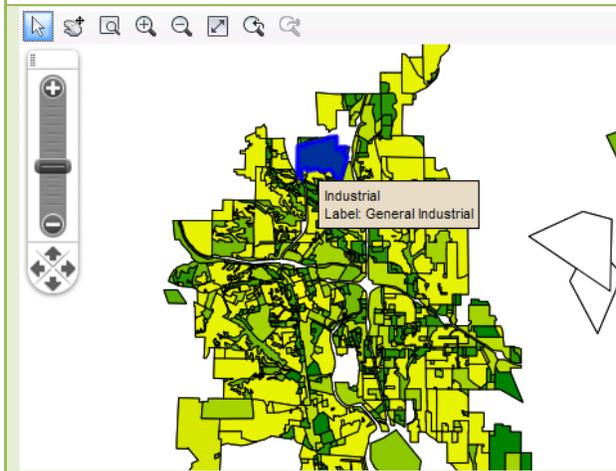
Using PostGIS/PostgreSQL for managing CAD and GIS data

<p>FdoPostGIS:zoning</p> <p>the_geom</p> <p><input checked="" type="checkbox"/> Select All <input type="checkbox"/> Clear All</p> <table border="1"> <thead> <tr> <th>Name to Display</th> <th>Property</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> gid</td> <td>gid</td> </tr> <tr> <td><input type="checkbox"/> zone_id</td> <td>zone_id</td> </tr> <tr> <td><input type="checkbox"/> zoning</td> <td>zoning</td> </tr> <tr> <td><input type="checkbox"/> zone_class</td> <td>zone_class</td> </tr> <tr> <td><input type="checkbox"/> zone_desc</td> <td>zone_desc</td> </tr> </tbody> </table>	Name to Display	Property	<input checked="" type="checkbox"/> gid	gid	<input type="checkbox"/> zone_id	zone_id	<input type="checkbox"/> zoning	zoning	<input type="checkbox"/> zone_class	zone_class	<input type="checkbox"/> zone_desc	zone_desc	<p>Select all the attributes and click the Refresh button.</p> 								
Name to Display	Property																				
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<input type="checkbox"/> zoning	zoning																				
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<input type="checkbox"/> zone_desc	zone_desc																				
	<p>Create a Map using thematic layers etc.</p> <table border="1"> <thead> <tr> <th>Condition</th> <th>Style</th> <th>Feature Label</th> <th>Legend Label</th> </tr> </thead> <tbody> <tr> <td>"zone_class" = '...</td> <td>...</td> <td>None</td> <td>'Industrial'</td> </tr> <tr> <td>"zone_class" = '...</td> <td>...</td> <td>None</td> <td>'Mixed Use'</td> </tr> <tr> <td>"zone_class" = '...</td> <td>...</td> <td>None</td> <td>'Multiple Family'</td> </tr> <tr> <td>"zone_class" = '...</td> <td>...</td> <td>None</td> <td>'Office'</td> </tr> </tbody> </table> <p>Make sure you save  the layer and wait a while to load the theme. If required, close it and reopen it.</p>	Condition	Style	Feature Label	Legend Label	"zone_class" = '...	...	None	'Industrial'	"zone_class" = '...	...	None	'Mixed Use'	"zone_class" = '...	...	None	'Multiple Family'	"zone_class" = '...	...	None	'Office'
Condition	Style	Feature Label	Legend Label																		
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"zone_class" = '...	...	None	'Office'																		
	<p>Create a Map in the MapGuide repository/Folder.</p>																				
<p>Coordinate system: CA-I (NAD27 Cali)</p>	<p>Assign appropriate coordinate system.</p>																				
	<p>Add layer from PostGIS database to Map. Or add multiple layers from different resources or from PostGIS</p>																				

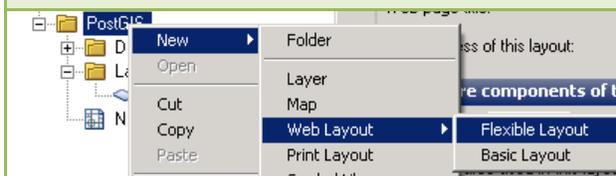
## Using PostGIS/PostgreSQL for managing CAD and GIS data



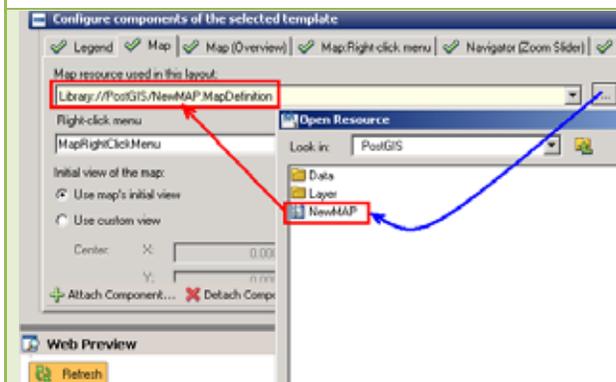
Make sure you assign Extents in the Map and click the glowing Refresh button to revive layers in the Map in Autodesk MapGuide Studio.



View the data after refreshing the Map.

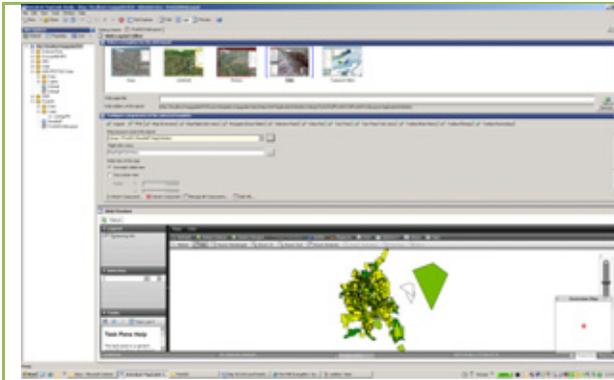


Create Flexible Web Layout in Repository.



Add Map with PostGIS layers to the Flexible Web Layout. Save Web Layout.

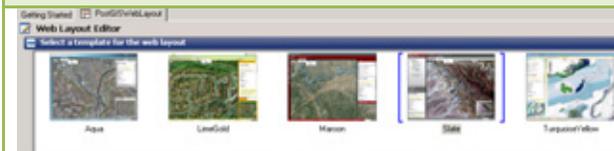
**Using PostGIS/PostgreSQL for managing CAD and GIS data**



Click the Refresh button to see the preview of the Web Layout.

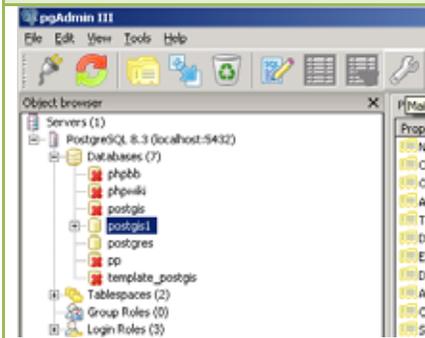


Click the  button to publish the data on the web.



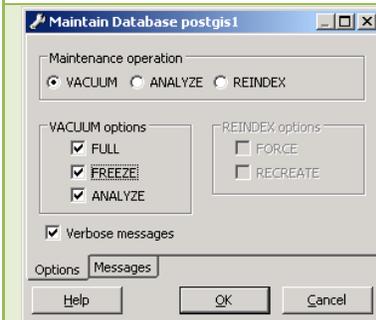
Change the Web Layouts according to the usage. Store the link in favorites for further usage

If required, run Vacuum on PostGIS to keep the data maintained. Follow the steps to run Vacuum below:



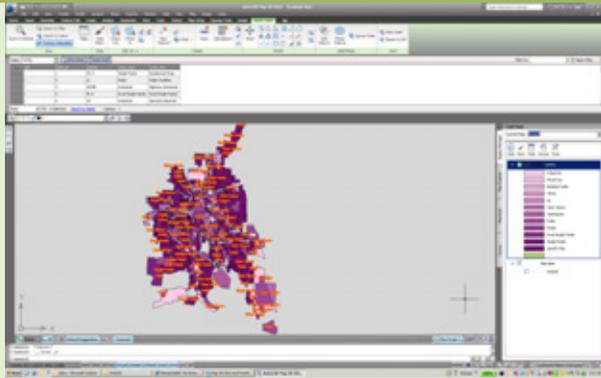
Go to pgAdminIII and select the database that you want to run Vacuum on.

Click the  button to run the Analysis.

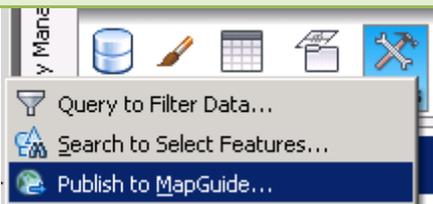


Select Vacuum and check desired Vacuum options. Click OK, and once it is finished, click Done to close it. This will help optimize your PostGIS database . You may have to run Vacuum frequently.

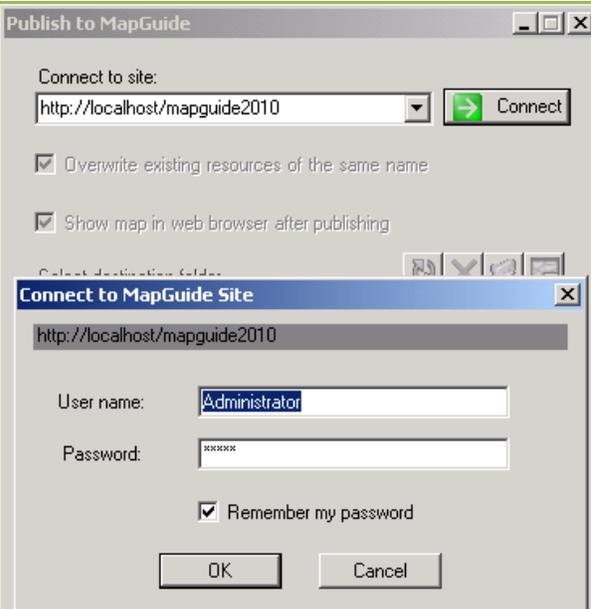
**Publishing PostGIS/PostgreSQL data from Map 3D to MapGuide Enterprise:**



Once you set up with Map 3D and PostGIS connection, you can publish the data to Autodesk MapGuide Enterprise from the desktop engine.



Go to Display Manager>Tools>Publish to MapGuide...

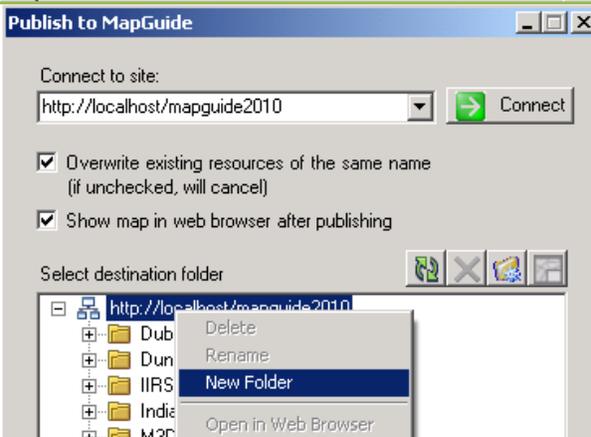


Click Connect to publish the data on MapGuide, which could be following link in your case: <http://localhost/mapguide2010>

The default username and password are as below

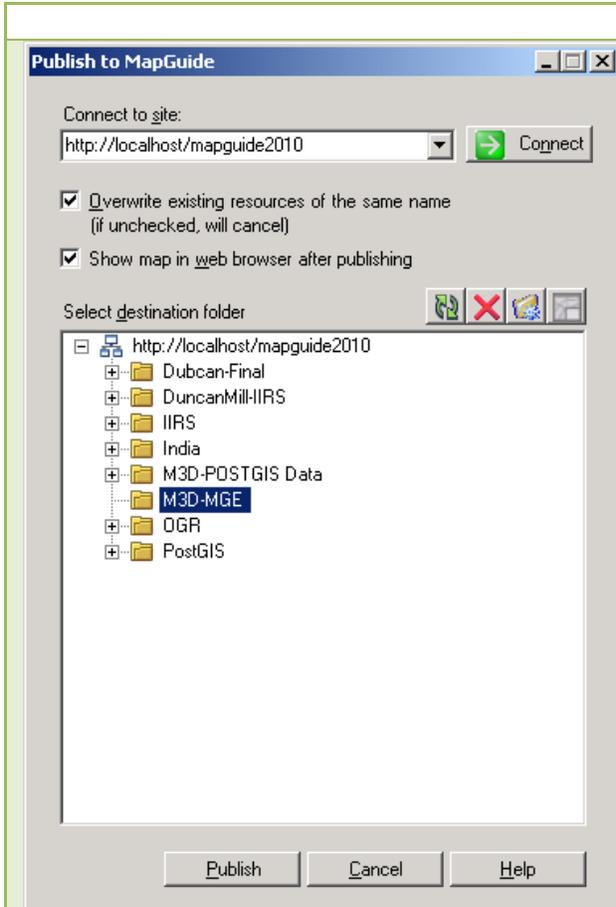
Username: **Administrator**  
Password: **admin**

Click OK.

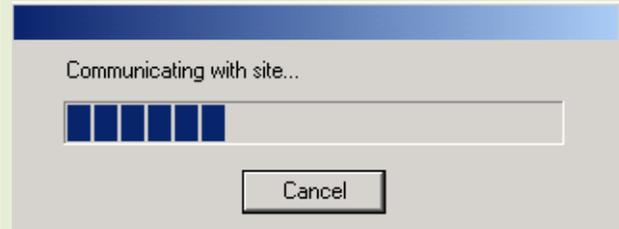


Create a new folder in the repository or use an existing one to publish the map on the web.

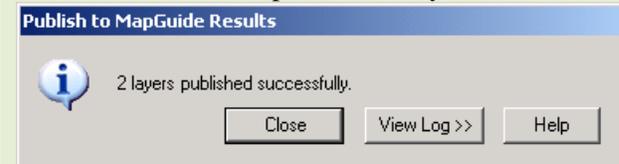
## Using PostGIS/PostgreSQL for managing CAD and GIS data



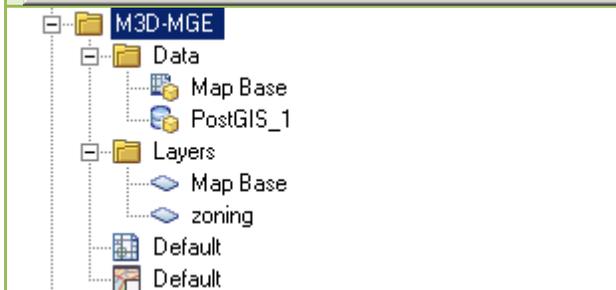
Select the folder and click Publish.



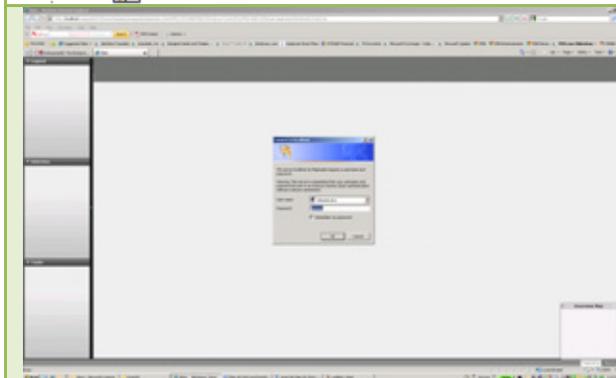
This will connect and publish the layers on the web:



Click Close to view the published layer in the web browser. For example, IE7.

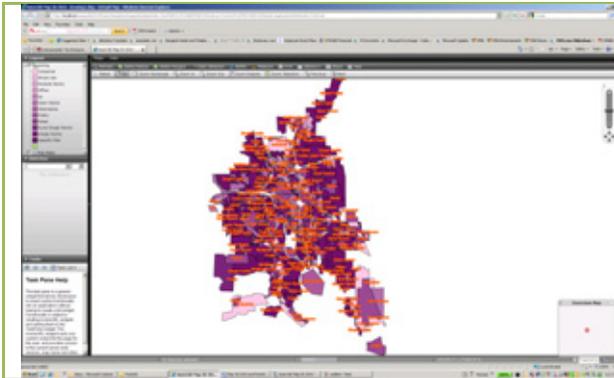


Automatically it will create a default directory structure to publish the data on the web.

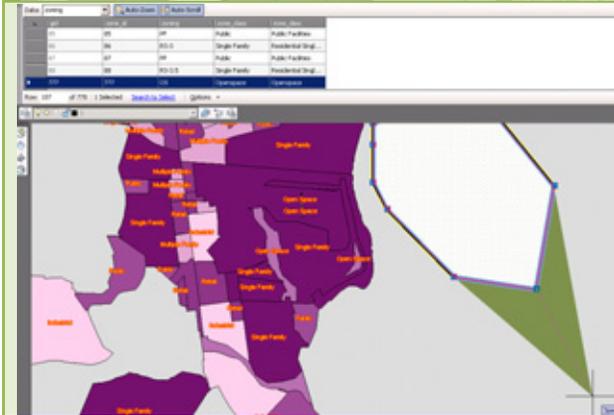


The web browser will open automatically. Provide respective credentials to access the map on the web. Use Anonymous with no password for anonymous access.

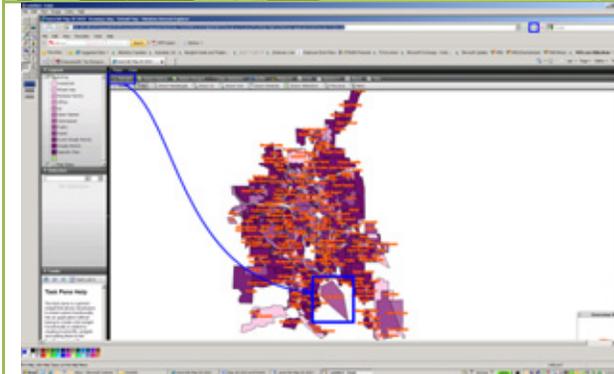
## Using PostGIS/PostgreSQL for managing CAD and GIS data



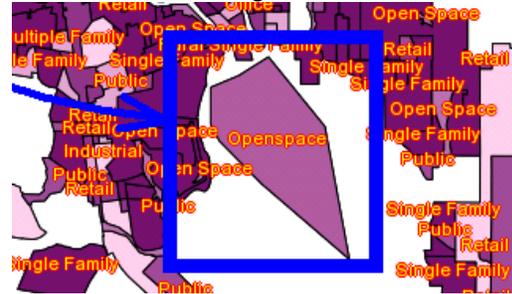
Click OK to view the map on the web.



Make any changes in Map 3D and check the data in PostGIS and switch to web browser.



Refresh the connection to double check the changes online. The following is a closer view.



With this dynamic connectivity between AutoCAD Map 3D and Autodesk MapGuide Enterprise, you can use AutoCAD Map 3D as an editing tool on the desktop and Autodesk MapGuide Enterprise as web publishing software.

### Disclaimer

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