# Introduction to Cloud Geocoding in MapInfo

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This article will show you how to get started with our cloud geocoding capabilities. This is in addition to the existing Spectrum or Envinsa methods that were previously supported.

Beginning with MapInfo Pro v16, we introduced a cloud geocoding service with coverage for over 140 countries. You will be provided with a limited amount of free access to cloud geocoding with your MapInfo license. You can easily upgrade to a paid subscription to get additional geocoding capacity, as needed. With a simple signup process that takes only a minute, you can be geocoding almost immediately.

Signing up

To sign up, click on the Pro tab inside MapInfo and then on then on Services or Geocoding depending on which version of MapInfo you are using. From there, just click the "Sign Up Now" button to get started. After submitting your information, you'll receive an email confirming that you are signed up.
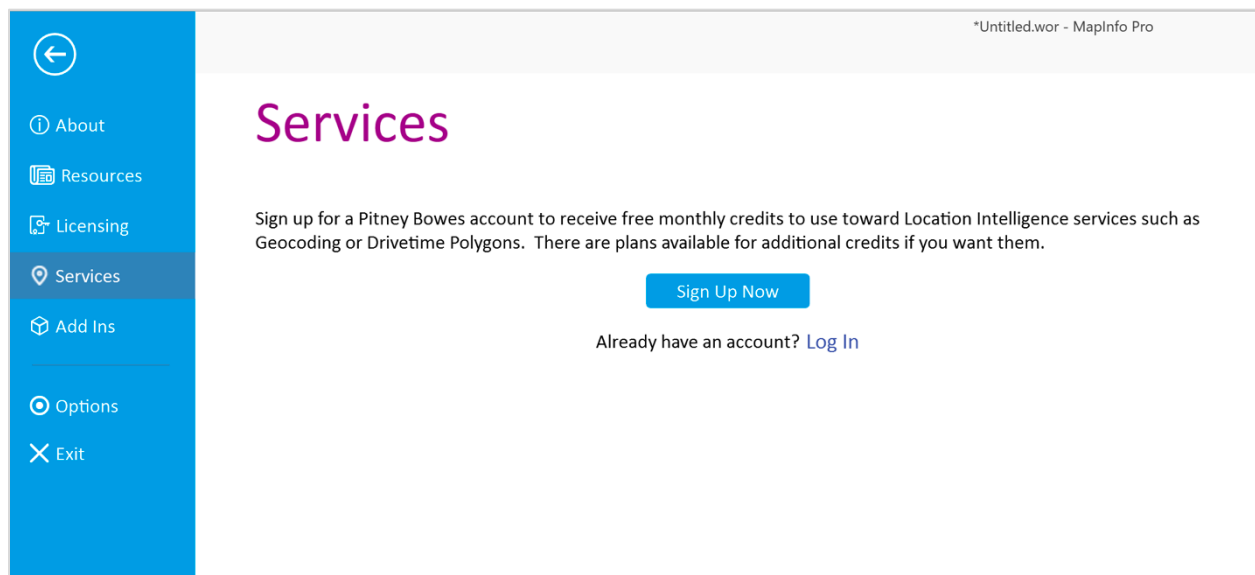
** For v16 only: You'll need to input the license key info from the email into the Geocoding tab in order to activate your license.

Once your subscription is activated, you should see the credit meter indicating how many free credits you have available.
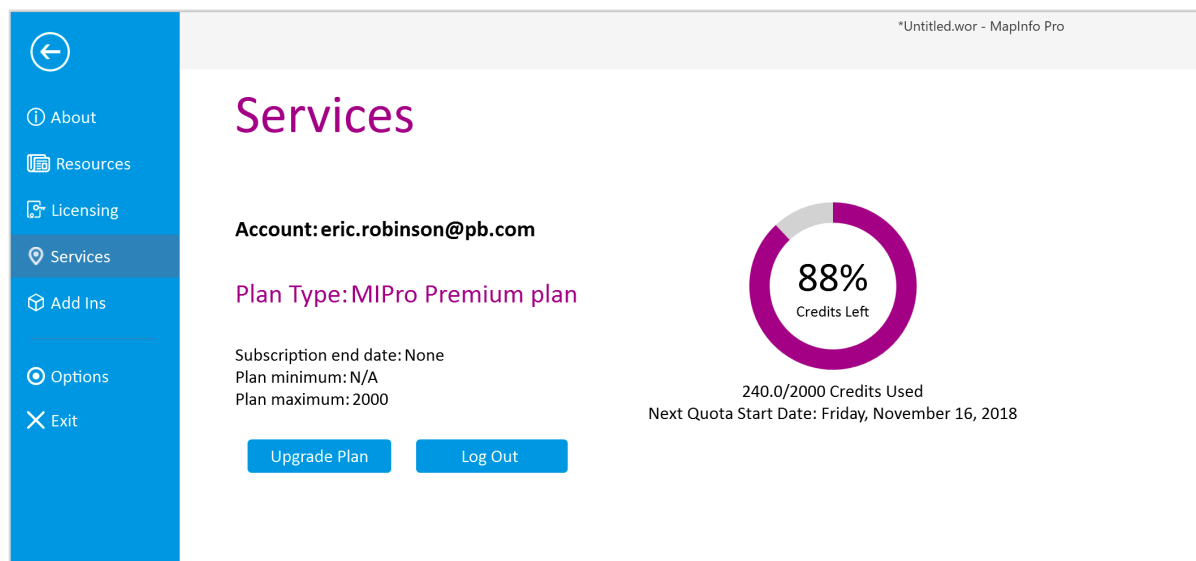
How credits work

With a MapInfo license (v16 or later), you'll receive a number of free credits per month to use for geocoding or other services as they become available. The free credits will be displayed on the credit meter. Paid plans are also available by clicking on the "Upgrade Plan" button for details.

There are two levels of geocoding precision that use different amounts of credits per operation. At the time of this writing, the credit usage for each are:

       City/Postcode level   – 0.1 credit
       Street/Rooftop level – 3 credits

Upgrading your subscription plan to get more credits

To get additional credits, click on the "Upgrade Plan" button which will bring you to our plan web page where you'll find instructions for purchasing a subscription. Once purchased, your account will be automatically upgraded and should be reflected in the credit meter. There is no additional configuration required to use the purchased credits.

Geocoding User Interface

In MapInfo v17, we introduced a new Geocoding tool which you can find in the Tools menu. This is loaded by default and will override the older geocoding dialog. The new tool is simpler to use but if you prefer the older one, you can simply unload the geocoding tool from the Tools menu and the older one will be restored. This article, however, will only cover the new tool.
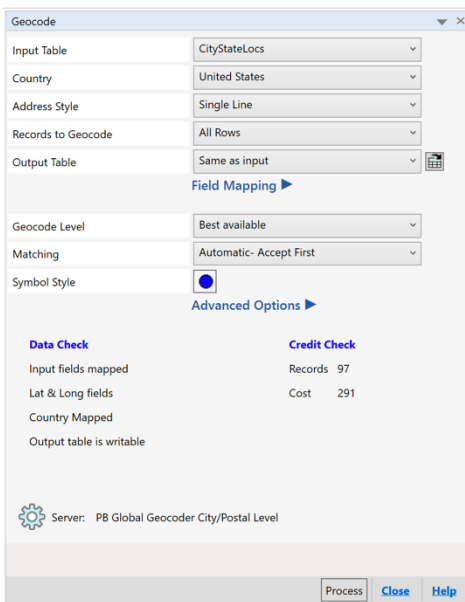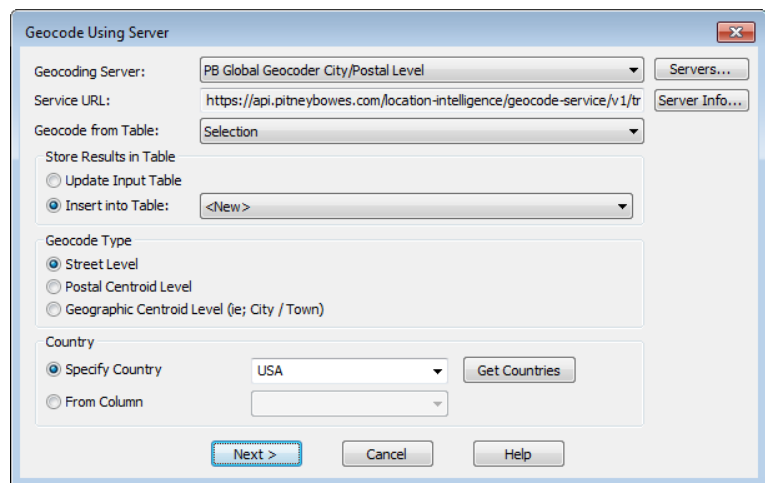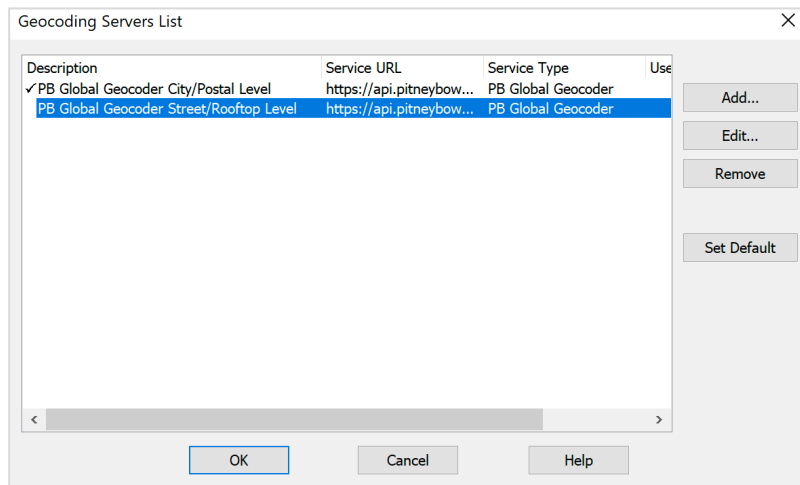

New Geocoding Tool   Older User Interface

Both of the tools will work with either the cloud or Spectrum services. The Cloud services will be setup automatically when you install MapInfo. You should see two entries reflecting the two levels of Geocoding accuracy: City/Postal or Street/Rooftop.

Batch Geocoding

The new geocoding tool is useful for batch geocoding or geocoding a selection of records from a specific table. There is very little that you need to set in order to successfully geocode your records. The main settings are on this main panel:

Geocode		
Input Table	CityStateLocs	
Country	United States	
Address Style	Single Line	
Records to Geocode	All Rows	
Output Table	Same as input	
	Field Mapping ▶	
Geocode Level	Best available	
Matching	Automatic- Accept First	
Symbol Style	🔵	
	Advanced Options ▶	

Data Check		**Credit Check**	
Input fields mapped		Records	97
Lat & Long fields		Cost	291
Country Mapped			
Output table is writable			

⚙ Server: PB Global Geocoder City/Postal Level

[Process] **Close**   **Help**

Data Check

Checks for common problems and warns you. This will hopefully save you time and credits by helping you get it right the first time.

Credit Check

Provides information to help you assess how many credits this job will consume. Geocode Level and Number of Records are the factors that primarily affect this.

Important things to know:

- **Country** – Select a specific country if all addresses are from one country. Otherwise, use Multi-Country and it will use a Country field in the data to make the determination.

- **Address Style** – Can be either single line or multi-line. The tool will attempt to figure out which fields to use based on their names, but you should check them before geocoding.

- **Geocode Level** – Can be either Street/Building, City/Postcode or Best Available. Best Available will try to always give you the best results possible but will fall back to City/Postcode if a Street/Building match cannot be found. The server used will be chosen automatically and doesn't require you to set ahead of time.

- **Matching** – Controls handling of candidates from ambiguous addresses. Choosing to "accept first" will result in a higher success rate but may in rare circumstances include some incorrect results.

- **Field Mapping** – This controls what fields the geocoder will use for input and output.

Table Structure

Make sure your table can accommodate the output fields that you'd like to capture. The two primary fields for consideration are:

- **Longitude & Latitude** – You don't need to capture these from the geocode operation as the spatial point will be placed in the right location regardless. But you may still want these fields for reference and if so, they should be included in the table structure. Ideally, these would be Decimal type of recommended length (12,8) to accommodate the precision needed by most users.

- **Result Code** – A string to hold the result code from the geocode operation. This is useful for determining the quality of the address match and the spatial accuracy. This field should be a character (10).

If you need to modify your table structure at all to add fields or change type and length, you can use the "Table Structure" feature shown here:
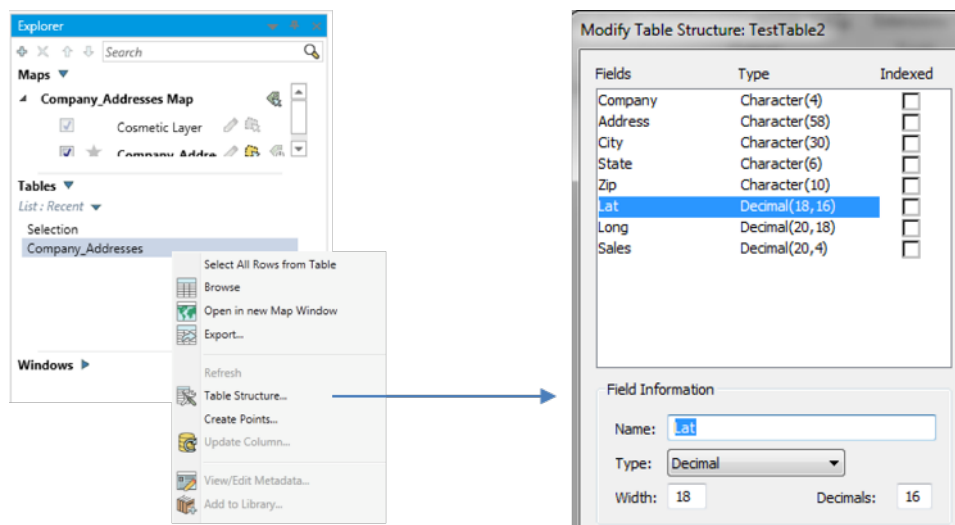
Result Codes

If you map the Result Code field in the Field Mapping options of the geocoder to a column in your table, you will see codes that looks like these below that will help you determine the quality of the geocoded point.

Location	latitude	longitude	resultcode
Boca Raton, FL	26.303	-80.2667	N
Fort Lauderdale, Florida	26.1168	-80.1527	S4HPN-S--A
Federal Way, Washington	38.9198	-77.0323	S8HP---C-A
Herkimer County, New York	40.0175	-76.8004	S4HPN-SC-A
Watkins Glen, New York	43.6067	-72.9958	S4HPN-S--A

Match Category (2 characters)
Provides detail on the geographic resolution with the second character representing the positional accuracy. An S8 is the highest level of accuracy.

Z [1-3]   – Zipcode/Postcode centroid
G[1-4]   – Geographic area centroid for areas
S [X,C,0-8]   -- Street Level match

Additional Match Information (8 characters)
Indicates which parts of the address were matched. This gives you extra confidence in the outcome and can also help you determine the source of problems when addresses don't geocode as you expected.

H – House Number
P – Street Prefix Direction (e.g. North Main Street or South)
N – Street Name
T – Street Type (Street, Road, Boulevard, etc.)
S – Street Suffix Direction (e.g. Main Street South)
C – Town Name
Z – Post code
A – Geocode dataset

For additional detail on result codes, see:
https://locate.pitneybowes.com/docs/location-intelligence/v1/en/index.html#GeoCode/ResultCodes/Intl_Geocoding/forward_geocoding_codes.html