

WhitePages PRO API™ Implementation Guide

Version 2.1

For more information, call WhitePages PRO® at 1.800.336.1327 or visit www.pro.whitepages.com

VERSION 2.1

WhitePages PRO

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Introduction

The WhitePages PRO API is an enterprise XML API that gives you the ability to integrate WhitePages data directly into your software applications and back-end processes. Results are returned within sub-second time for most queries. Our XML-based web service simplifies the development and integration process, making it easily deployable within your existing infrastructure. WhitePages PRO API creates a direct connection from your software applications to WhitePages' proprietary search logic and premium data.

Data available through the WhitePages PRO API is not identical to the information available on WhitePages.com. WhitePages member listings are not available through WhitePages PRO API. WhitePages PRO API returns a sub-set of premium data and does not include duplicates that you may find on WhitePages.com. In short, through WhitePages PRO API, you are receiving the highest quality data we have to offer.

Functionality Overview

API data is provided on a 24/7 basis via the WhitePages application servers. The infrastructure is designed to handle over 1,000 searches per second. To initiate a search, users submit a request to the servers via the HTTP GET method through the authenticated IP Address provided to WhitePages. The URL is made up of the server name, servlet path, and a list of parameters.

HTTP Request

All requests should be submitted to the base path of:

<http://enterprise.w3data.com/directaccess?ver=2.1>

Requests must include the “ver” parameter, which specifies what version of API you are using. The other parameters are search-dependent and are described in the following sections. For testing purposes, you may enter the requests as a URL into any web browser.

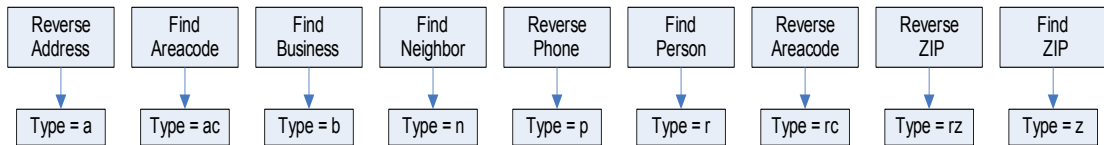
URL Parameter Tables

All parameter values need to be URL escaped as applicable. We allow parameter values to contain only alphanumeric characters (a-z, A-Z, 0-9), hyphens ("-"), and spaces. The space character should be replaced with the plus (+) character.

Required Parameters for ALL searches:

DESCRIPTION	PARAMETER	VALUE	LENGTH	DEFAULT
Version	ver	2.1	3	n/a
Search Type	type	a, ac, b, n, p, r, rc, rz, z	2	n/a

Currently, WhitePages provides nine types of searches via API. Choose the appropriate value based on the type of search you are performing.



Searchable Parameter Fields: (Varies by search type)

DESCRIPTION	PARAMETER	LENGTH
First Name	f	15
Last Name	l	20
Business Name	b	50
Business Keyword	kw	50
Business Category ID	bc	10
House Number	hn	15
Street	str	20
Full Address	addr	35
City	c	20
State/Province*	s	2
ZIP/Postal Code	z	6
Area Code	ac	3
Phone Number**	p	7 or 10

*Must be a valid two-letter postal abbreviation for a U.S. State or Canadian Province.

** 7 Digit phone searches must include an Area Code or State/Province.

Optional Parameters: (see details below)

DESCRIPTION	PARAMETER	VALUE	LENGTH	DEFAULT
Data Option	data	n, r, ne, re	2	n
Expanded Search	e	0-4	1	1
First Name Match	fk	b or eq	n/a	b
Last Name Match	lk	b or eq	n/a	b
Business Name Match	bk	b or eq	n/a	b
Number Of Neighbors	num	5-30	2	30
Add Pagination	pg	0 or 1	1	0
Pagination Listings Per Page	lpp	numeric	2	10
Metro Area Search	mas	0 or 1	1	0
Show Category Picklist	pl	0 or 1	1	1

Optional Parameters Value Key:

DATA OPTIONS (DATA)

Several different data options are available via API. To search on Real-Time data only, the “data” parameter must be included in the URL with a value of ‘r’. When a “data” parameter is not provided or provided with a value of ‘n’, Near-Time data is used as the default. In addition to the basic data options, “enhanced” data types may also be accessed within API.

- **Near-Time (n)** data is updated monthly for U.S. listings and quarterly for Canadian listings. It is an economical choice for customers not requiring the freshest available listings, while still providing directory assistance data that is fresher than offline directories and traditional compiled data.
- **Real-Time (r)** data is updated nightly, compiled from U.S. telephone companies and sourced directly to WhitePages’s contact information systems, processes, and products.
- **Near-Time Enhanced (ne)** is a proprietary search methodology where

the search query is first run through our Near-Time data source and if no match is found, the search is run through our Real-Time data source.

- **Real-Time Enhanced (re)** is a proprietary search methodology where the search parameter is first run through our Real-Time data source and if no match is returned the parameter is run through our Near-Time data source.

EXPANDED SEARCH (E)

In some types of searches, an expansion parameter can be used to expand the search from exact address criteria to a nationwide search. The level chosen will be the last one attempted in an iterative search process.

- **Exact (0)** searches on the exact query input. This will automatically include nicknames for first names, city name correction, USPS non accepted cities, and the removal of extraneous punctuation. This level can be too “literal” for some searches, resulting in lower-than-expected match rates.
- **Flexible (1)** is the best choice for searching and is the default expansion level. This provides for more flexibility in searching than the ‘Exact’ level, particularly in the area of the address. The Flexible expansion level will selectively remove extraneous address elements in an iterative process looking for the best possible match.
- **City & Surrounding Area (2)** will first attempt to match using the flexible level, however, if no results are found, the search radius will expand to include the entire city, and then the surrounding area. (typically expands to the county level)
- **State (3)** expands the search to a statewide level.
- **Nation (4)** expands the search to a nationwide level. N/A for Reverse Address or Reverse Phone searches.

NAME MATCHING (FK,LK,BK)

Name Match gives users the flexibility of choosing whether a search will look for an ‘equal to’ (eq) or a ‘begins with’ match (b). The system default is to look for a ‘begins with’ match (b) for Residential and Business Names.

First Name Match (fk)
Defaults to begins with (b)
Last Name Match (lk)
Defaults to begins with (b)
Business Name Match (bk)
Defaults to begins with (b)

NUMBER OF NEIGHBORS (NUM)

Find Neighbors searches find the closest neighbors on the same street as the address entered in the Find Neighbor query. The system default returns up to 30 results (num=30), however this can be edited to return any value between 5 and 30. For example, to return up to 12 neighbor listings, you can set the num parameter to a value of 12 (num=12). Due to variations in street length and number of neighbors available, it may not always be possible to return the desired number of listings.

PAGINATION

Pagination Parameters:

To receive paginated data, include the parameter pg with a value of 1 to the query string. When requesting paginated results, API will default to display up to 15 results per page. To change the number of results displayed per page, include the parameter lpp with a value based on the number of results to be displayed.

DESCRIPTION	PARAMETER	VALUE	EXAMPLE
Add Pagination	pg	1	pg=1
Listings Per Page	lpp	Integer	lpp=10

Example of a request to return paginated results (defaults to 15 results per page):

```
directaccess?ver=2.1&type=r&data=n&f=scott&l=smith&s=wa&pg=1
```

By default, pagination will return 15 results at a time. Users can override the default by appending the parameter lpp with a value representing the number of 'listings per page' to be displayed. This value can be any positive, non-zero integer not to exceed the API display max.

Example of a request to return paginated results at a rate of 12 results per page:

```
directaccess?ver=2.1&type=r&data=n&f=scott&l=smith&s=wa&pg=1&lpp=12
```

Pagination Element Tags:

If the Pagination feature (pg) is requested in API, three new XML element tags will appear as children of the <INFO> element tag:

<TOTAL_RESULTS>

This element tag will contain the total number of search results that API will display.

<NEXT_RESULTS>

If there is another page of results to present, this element tag will contain the URL-encoded URL to retrieve the next page of results. If there are no further pages, this element tag will still exist, however the data will be null.

For example:

```
directaccess?ver=2.1&type=r&l=smith&f=john&c=seattle&s=wa&data=n&pg=1
```

```
<NEXT_RESULTS>http%3A%2F%2Fwww.w3data.com%2Fdirectaccess%3F%3Dseat  
tle%26s%3Dwa%26e%3D1%26ver%3D12.1%26data%3Dn%26f%3Djohn%26lpp%3D15%26typ  
e%3Dr%26l%3Dsmith%26search_id%3D20141152926481246536%26pg%3D2  
</NEXT_RESULTS>
```

Decoding and following the URL presented will display the next page of results.

<PREV_RESULTS>

This element tag behaves just as <NEXT_RESULTS>, but will contain the URL-encoded URL to retrieve the previous page of results. For page one, this element tag will contain no data (no previous page).

Continuing with the previous example:

Assuming the <TOTAL_RESULTS> tag contained 22, after the first page of 15 there are 7 more results to display on the second page.

<NEXT_RESULTS/>

```
<PREV_RESULTS>http%3A%2F%2Fwww.w3data.com%2Fdirectaccess%3F%3Dseat  
tle%26s%3Dwa%26e%3D1%26ver%3D12.1%26data%3Dn%26f%3Djohn%26lpp%3D15%26typ  
e%3Dr%26l%3Dsmith%26search_id%3D10141152925481615536%26pg%3D1  
</PREV_RESULTS>
```

Being the last page, <NEXT_RESULTS> contains no data, but <PREV_RESULTS> contains the URL containing the previous page of results.

The ideal method for following through pages is to check the value of the next/previous results elements. If a value exists, an adjacent page exists. URL-decode the value and follow the resultant URL to the desired adjacent page of results. It is **not** recommended to retrieve an adjacent page by constructing the URL manually, but to always follow the URL provided.

EXAMPLE OF A FIND PERSON LISTING RESPONSE WITH PAGINATION:

```
directaccess?ver=2.1&type=r&f=scott&l=smith&s=wa&pg=1
```

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
```


METRO AREA SEARCH

By using the parameter 'mas=1' you can expand your search to the metro area, effectively broadening your search to the surrounding region. By default, metro area searching is off ('mas=0').

ALLOW CATEGORY PICKLIST

By default, if a business category search would return too many listings, API will return a list of suggested categories that can be used to refine the search. (See the 'MULTIPLE CATEGORIES' response code) However, since this may require an additional application interface to present the category list, some applications may prefer to prevent the display of a category picklist. Setting 'pl=0' on a business search based on a category forces the API application to return listings and a 'TRUNCATED RESULTS' code, even if the category is very broad.

SEARCH TYPES

Find Person (type=r)

SEARCHABLE PARAMETERS

Required: Last Name (l)

Recommended: First Name (f), City(c), State/Province (s), ZIP/Postal Code (z)

Notes: Do not use Middle Initials in addition to First Name.

EXAMPLE OF A FIND PERSON SEARCH QUERY:

```
http://enterprise.w3data.com/directaccess?ver=2.1&type=r&f=sam&l=smith&c=seattle&s=wa
```

EXAMPLE OF A FIND PERSON LISTING RESPONSE:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>20130552484566814626</SEARCH_ID>
    <SEARCH_TYPE>Find_Person</SEARCH_TYPE>
    <COUNT>13</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <NAME>
        <FIRST>Sam</FIRST>
        <LAST>Smith</LAST>
      </NAME>
      <ADDRESS>
        <NUM>258</NUM>
        <STREET>Brier Rd</STREET>
        <CITY>Brier</CITY>
        <STATE>WA</STATE>
        <ZIP>98036</ZIP>
        <ZIP4>8249</ZIP4>
        <COUNTRY>United States</COUNTRY>
        <DPC>182</DPC>
        <CR>C056</CR>
      </ADDRESS>
      <PHONE>4254836946</PHONE>
      <GEO_EXTRA>
        <LATITUDE>47.785231</LATITUDE>
        <LONGITUDE>-122.27428</LONGITUDE>
        <FIPS>53061</FIPS>
        <MSA>7600</MSA>
        <Z4_TYPE>S</Z4_TYPE>
        <GEO_PREC>0</GEO_PREC>
      </GEO_EXTRA>
      <LISTING_ID>1</LISTING_ID>
```

Find Business (type=b)

SEARCHABLE PARAMETERS

Required: Business Name (b) or Business Keyword (kw) or Business Category ID (bc)
Recommended: Address (addr) or (hn) & (s), City (c), State/Province (s), ZIP/Postal Code (z)

Example of a Find Business search query:

```
http://enterprise.w3data.com/directaccess?ver=2.1&type=b&b=starbucks&c=allens=tx
http://enterprise.w3data.com/directaccess?ver=2.1&type=b&kw=coffee&c=allens=tx
http://enterprise.w3data.com/directaccess?ver=2.1&type=b&bc=4451014004&c=seattle&s=wa
```

Example of a Find Business Listing Response: (May include Caption Sets which are groupings of associated listings)

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>10130552485070501680</SEARCH_ID>
    <SEARCH_TYPE>Find _ Business</SEARCH_TYPE>
    <COUNT>3</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <NAME>
        <BUS>Starbucks Coffee</BUS>
      </NAME>
      <ADDRESS>
        <NUM>434</NUM>
        <STREET>Broadway E</STREET>
        <CITY>Seattle</CITY>
        <STATE>WA</STATE>
        <ZIP>98102</ZIP>
        <ZIP4>5010</ZIP4>
        <COUNTRY>United States</COUNTRY>
        <CR>C022</CR>
      </ADDRESS>
      <PHONE>2063237888</PHONE>
      <SIC>
        <SIC1>58120304</SIC1>
        <SIC2>54990204</SIC2>
        <SIC3>54990201</SIC3>
      </SIC>
      <CATEGORY>
        <YP_HEADER1>Coffee & Tea Retail</YP_HEADER1>
      </CATEGORY>
    </LISTING>
  </LISTINGS>
</RESULTS>
```

```
</CATEGORY>
<GEO_EXTRA>
  <FIPS>53033</FIPS>
  <Z4_TYPE>S</Z4_TYPE>
  <GEO_PREC>6</GEO_PREC>
</GEO_EXTRA>
<LISTING_ID>1</LISTING_ID>
```

Reverse Address (type=a)

SEARCHABLE PARAMETERS

Required: Full Address (addr), or House Number (hn) & Street (str), State/Province (s)

Recommended: City (c), ZIP/Postal Code (z)

Notes: Do not use Name Elements or Phone

Example of a Reverse Address search query:

```
http://enterprise.w3data.com/directaccess?ver=2.1&type
=a&hn=58&str=271st+St&c=seattle&s=wa
```

```
http://enterprise.w3data.com/directaccess?ver=2.1&typ
e=a&addr=4+Pine+Rd&z=98101&rd=bnd3
```

Example of a Reverse Address Listing Response:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>20130552484566814699</SEARCH_ID>
    <SEARCH_TYPE>Reverse_Address</SEARCH_TYPE>
    <COUNT>1</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <NAME>
        <FIRST>Bob</FIRST>
        <FIRST_2>Marie</FIRST_2>
        <FIRST_3>Wendy</FIRST_3>
        <LAST>Smith</LAST>
      </NAME>
      <ADDRESS>
        <NUM>2033</NUM>
        <STREET>Second Ave</STREET>
        <ADD2>Apt 222</ADD2>
        <CITY>Seattle</CITY>
        <STATE>WA</STATE>
        <ZIP>98121</ZIP>
```

```

    <ZIP4>2272</ZIP4>
    <COUNTRY>United States</COUNTRY>
    <DPC>279</DPC>
    <CR>C076</CR>
  </ADDRESS>
  <PHONE>2064485155</PHONE>
  <GEO_EXTRA>
    <LATITUDE>47.612089</LATITUDE>
    <LONGITUDE>-122.34222</LONGITUDE>
    <FIPS>53033</FIPS>
    <MSA>7600</MSA>
    <Z4_TYPE>H</Z4_TYPE>
    <GEO_PREC>0</GEO_PREC>
  </GEO_EXTRA>
  <LISTING_ID>1</LISTING_ID>
</LISTING>
</LISTING>
</RESULTS>

```

Reverse Phone (type=p)

SEARCHABLE PARAMETERS

Required: 10 digit Phone (p) or 7 digit Phone (p) & Area Code (ac) or 7 digit Phone (p) & State/Province (s)

Optional: Toll Free Search: 7 digit Phone (p) & State/Province (s) = TF

Notes: Do not use Name or Address Elements

Examples of a Reverse Phone Search Query:

<http://enterprise.w3data.com/directaccess?ver=2.1&type=p&p=4253911218>

<http://enterprise.w3data.com/directaccess?ver=2.1&type=p&ac=905&p=5551212>

<http://enterprise.w3data.com/directaccess?ver=2.1&type=p&s=TF&p=4268020>

Example of a Reverse Phone Listing Response:

```

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>10130552485071542682</SEARCH_ID>
    <SEARCH_TYPE>Reverse_Phone</SEARCH_TYPE>
    <COUNT>1</COUNT>
  </INFO>
  <LISTINGS>

```

```

<LISTING>
  <NAME>
    <FIRST>Mike</FIRST>
    <LAST>Nichols</LAST>
  </NAME>
  <ADDRESS>
    <NUM>22212</NUM>
    <STREET>SE Tiger Mountain Rd</STREET>
    <CITY>Issaquah</CITY>
    <STATE>WA</STATE>
    <ZIP>98027</ZIP>
    <ZIP4>8355</ZIP4>
    <COUNTRY>United States</COUNTRY>
    <DPC>120</DPC>
    <CR>R025</CR>
  </ADDRESS>
  <PHONE>4253925555</PHONE>
  <CARRIER>Qwest Corporation</CARRIER>
  <TYPE>Geographic</TYPE>
  <GEO_EXTRA>
    <LATITUDE>47.474025</LATITUDE>
    <LONGITUDE>-121.99429</LONGITUDE>
    <FIPS>53033</FIPS>
    <MSA>7600</MSA>
    <Z4_TYPE>S</Z4_TYPE>
    <GEO_PREC>1</GEO_PREC>
  </GEO_EXTRA>
  <LISTING_ID>1</LISTING_ID>
</LISTING>
</LISTINGS>
</RESULTS>

```

Find Neighbor (type=n)

Find Neighbors finds the 5-30 (user defined) closest neighbors on the same street as the address entered in the Find Neighbor query. The system default returns up to 30 results (num=30), however this can be edited to return any value between 5 -30. Due to variations in street length and number of neighbors available, it may not always be possible to return the desired number of listings.

SEARCHABLE PARAMETERS

Required: Full Address (addr), or House Number (hn) & Street (str), City (c), State/Province (s)

Recommended: ZIP/Postal Code (z)

Notes: Do not use Name Elements or Phone

Examples of a Find Neighbor Search Query:

http://enterprise.w3data.com/directaccess?ver=2.1&ty
pe=n&num=10&addr=20+Main+St&c=peoria&s=az

Example of a Find Neighbor Listing Response:

```
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>10281402228961597778</SEARCH_ID>
    <SEARCH_TYPE>Find_Neighbors</SEARCH_TYPE>
    <COUNT>2</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <NAME>
        <FIRST>Albert</FIRST>
        <LAST>Malik</LAST>
      </NAME>
      <ADDRESS>
        <NUM>10020</NUM>
        <STREET>Main St</STREET>
        <ADD2>Apt 287</ADD2>
        <CITY>Bellevue</CITY>
        <STATE>WA</STATE>
        <ZIP>98004</ZIP>
        <ZIP4>6064</ZIP4>
        <COUNTRY>United States</COUNTRY>
        <DPC>995</DPC>
        <CR>C042</CR>
      </ADDRESS>
      <PHONE>NON-PUBLISHED</PHONE>
      <LISTING_ID>1</LISTING_ID>
    </LISTING>
    <LISTING>
      <NAME>
        <FIRST>John</FIRST>
        <LAST>Rosenberg</LAST>
      </NAME>
      <ADDRESS>
        <NUM>10020</NUM>
        <STREET>Main St</STREET>
        <CITY>Bellevue</CITY>
        <STATE>WA</STATE>
        <ZIP>98004</ZIP>
        <ZIP4>6064</ZIP4>
        <COUNTRY>United States</COUNTRY>
        <DPC>995</DPC>
        <CR>C042</CR>
      </ADDRESS>
      <PHONE>206-973-4410</PHONE>
      <LISTING_ID>2</LISTING_ID>
    </LISTING>
  </LISTINGS>
</RESULTS>
```

Find Area Code (type=ac)

SEARCHABLE PARAMETERS

Required: State/Province (s)

Recommended: City (c)

Example of a Find Area Code Search Query:

<http://enterprise.w3data.com/directaccess?ver=2.1&type=ac&c=seattle&s=wa>

Example of a Find Area Code Listing Response:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
    <SEARCH_ID>10200571442772637295</SEARCH_ID>
    <SEARCH_TYPE>Find_Areacode</SEARCH_TYPE>
    <COUNT>1</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <ADDRESS>
        <COUNTRY>United States</COUNTRY>
      </ADDRESS>
      <AREACODE>206</AREACODE>
      <LISTING_ID>1</LISTING_ID>
    </LISTING>
  </LISTINGS>
</RESULTS>
```

Reverse Area Code (type=rc)

SEARCHABLE PARAMETERS

Required: Area Code (ac)

Example of a Reverse Area Code Search Query:

<http://enterprise.w3data.com/directaccess?ver=2.1&type=rc&ac=602>

Example of a Reverse Area Code Listing Response:

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>
  </INFO>
</RESULTS>
```

```

<SEARCH_ID>10130552484877148474</SEARCH_ID>
<SEARCH_TYPE>Reverse_Areacode</SEARCH_TYPE>
<COUNT>3</COUNT>
</INFO>
<LISTINGS>
  <LISTING>
    <ADDRESS>
      <CITY>Laveen</CITY>
      <STATE>AZ</STATE>
      <COUNTRY>United States</COUNTRY>
    </ADDRESS>
    <LISTING_ID>1</LISTING_ID>
  </LISTING>
  <LISTING>
    <ADDRESS>
      <CITY>Phoenix</CITY>
      <STATE>AZ</STATE>
      <COUNTRY>United States</COUNTRY>
    </ADDRESS>
    <LISTING_ID>2</LISTING_ID>
  </LISTING>
  <LISTING>
    <ADDRESS>
      <CITY>Scottsdale</CITY>
      <STATE>AZ</STATE>
      <COUNTRY>United States</COUNTRY>
    </ADDRESS>
    <LISTING_ID>3</LISTING_ID>
  </LISTING>
</LISTINGS>
</RESULTS>

```

Find ZIP/Postal Code (type=z)

SEARCHABLE PARAMETERS

Required: City (c), State/Province (s)

Example of a Find ZIP/Postal Code Search Query:

<http://enterprise.w3data.com/directaccess?ver=2.1&type=z&c=seattle&s=wa>

Example of a Find ZIP/Postal Code Listing Response:

```

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>TRUNCATED RESULTS</STATUS>
    <SEARCH_ID></SEARCH_ID>
    <SEARCH_TYPE>Find_Zip</SEARCH_TYPE>
  </INFO>

```

```

    <COUNT>4</COUNT>
  </INFO>
  <LISTINGS>
    <LISTING>
      <ADDRESS>
        <ZIP>98101</ZIP>
        <COUNTRY>United States</COUNTRY>
      </ADDRESS>
      </LISTING_ID>1</LISTING_ID>
    </LISTING>
    <LISTING>
      <ADDRESS>
        <ZIP>98102</ZIP>
        <COUNTRY>United States</COUNTRY>
      </ADDRESS>
      </LISTING_ID>2</LISTING_ID>
    </LISTING>
    <LISTING>
      <ADDRESS>
        <ZIP>98103</ZIP>
        <COUNTRY>United States</COUNTRY>
      </ADDRESS>
      </LISTING_ID>3</LISTING_ID>
    </LISTING>
    <LISTING>
      <ADDRESS>
        <ZIP>98104</ZIP>
        <COUNTRY>United States</COUNTRY>
      </ADDRESS>
      </LISTING_ID>4</LISTING_ID>
    </LISTING>
  </LISTINGS>
</RESULTS>

```

Reverse ZIP/Postal Code (type=rz)

SEARCHABLE PARAMETERS

Required: ZIP/Postal Code (z)

Example of a Reverse ZIP/Postal Code Search Query:

<http://enterprise.w3data.com/directaccess?ver=2.1&type=rz&z=98101>

Example of a Reverse ZIP/Postal Code Listing Response:

```

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
<RESULTS>
  <INFO>
    <VERSION>2.1</VERSION>
    <STATUS>OK</STATUS>

```

```
<SEARCH_ID>102005714427733005296</SEARCH_ID>
<SEARCH_TYPE>Reverse_Zip</SEARCH_TYPE>
<COUNT>1</COUNT>
</INFO>
<LISTINGS>
  <LISTING>
    <ADDRESS>
      <CITY>Seattle</CITY>
      <STATE>WA</STATE>
      <COUNTRY>United States</COUNTRY>
    </ADDRESS>
    <LISTING_ID>1</LISTING_ID>
  </LISTING>
</LISTINGS>
</RESULTS>
```

XML RESPONSE OVERVIEW

API results consist of a standard HTTP response with XML formatted data.

Status Response Codes

API will always return a status code in response to a search request. These responses will be populated in the status field.

STATUS CODE	DESCRIPTION
OK	Listings found and retrieved.
PARTIAL	Used for reverse phone search when the telephone carrier was found, but not the actual listing.
NONE FOUND	No matching data was found.
TOO MANY LISTINGS	The search produced too many results. Try refining the search to reduce the number of results.
TRUNCATED RESULTS	Displays a portion of your result set when the number of results exceeds the API display max.
MULTIPLE CITIES	The search inputs matched multiple cities & the query needs to be narrowed to a specific city.
NO CITY FOUND	The given city name was not found.
BAD INPUT	An input parameter is incorrect or missing.
DENIED	User does not have the correct authorization to access the data server. Common reasons include: access attempt by non-authenticated IP Address ("IP Not Permitted") or terms/billing issues ("No available funds").
INTERNAL SERVER ERROR	The WhitePages servers have experienced an internal error.
MULTIPLE CATEGORIES	Refine search - Multiple Business Categories

OK

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>OK</STATUS>
<SEARCH_ID>10291102868749709015</SEARCH_ID>
<SEARCH_TYPE>Find_Person</SEARCH_TYPE>
<COUNT>2</COUNT>
</INFO>
+ <LISTINGS>
</RESULTS>

```

NONE FOUND

```

<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>NONE FOUND</STATUS>
<SEARCH_ID>20281102868884467024</SEARCH_ID>
<SEARCH_TYPE>Find_Person</SEARCH_TYPE>
<COUNT>0</COUNT>
</INFO>
</RESULTS>

```

PARTIAL

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>PARTIAL</STATUS>
<SEARCH_ID>10291102877449791040</SEARCH_ID>
<SEARCH_TYPE>Reverse_Phone</SEARCH_TYPE>
<COUNT>1</COUNT>
</INFO>
- <LISTINGS>
- <LISTING>
- <ADDRESS>
<CITY>Issaquah</CITY>
<STATE>WA</STATE>
<COUNTRY>United States</COUNTRY>
</ADDRESS>
<CARRIER>Qwest Corporation</CARRIER>
<TYPE>Geographic</TYPE>
</LISTING>
</LISTINGS>
</RESULTS>

```

TOO MANY LISTINGS

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>TOO MANY LISTINGS</STATUS>
<SEARCH_ID>20281102868783609995</SEARCH_ID>
<SEARCH_TYPE>Find_Person</SEARCH_TYPE>
<COUNT>0</COUNT>
</INFO>
</RESULTS>

```

TRUNCATED RESULTS

```

<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>TRUNCATED RESULTS</STATUS>
<SEARCH_ID>10291100048750009003</SEARCH_ID>
<SEARCH_TYPE>Find_Person</SEARCH_TYPE>
<COUNT>50</COUNT>
</INFO>
+ <LISTINGS>
</RESULTS>

```

MULTIPLE CITIES

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
  <VERSION>2.1</VERSION>
  <STATUS>MULTIPLE CITIES</STATUS>
  <SEARCH_ID>10291102868779536042</SEARCH_ID>
  <SEARCH_TYPE>Find_Person</SEARCH_TYPE>
  <COUNT>2</COUNT>
</INFO>
- <LISTINGS>
- <LISTING>
- <ADDRESS>
  <CITY>Pearcot</CITY>
  <STATE>WA</STATE>
  <COUNTRY>United States</COUNTRY>
</ADDRESS>
</LISTING>
- <LISTING>
- <ADDRESS>
  <CITY>Pearson</CITY>
  <STATE>WA</STATE>
  <COUNTRY>United States</COUNTRY>
</ADDRESS>
</LISTING>
- <LISTING>
```

NO CITY FOUND

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
  <VERSION>2.1</VERSION>
  <STATUS>NO CITY FOUND</STATUS>
  <SEARCH_ID>20281100048784255998</SEARCH_ID>
  <SEARCH_TYPE>Find_Person</SEARCH_TYPE>
  <COUNT>0</COUNT>
</INFO>
</RESULTS>
```

BAD INPUT

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
  <VERSION>2.1</VERSION>
  <STATUS>BAD INPUT</STATUS>
  <DESCRIPTION>'z' is a required input</DESCRIPTION>
</INFO>
</RESULTS>
```

INTERNAL SERVER ERROR

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>INTERNAL SERVER ERROR</STATUS>
<DESCRIPTION>INTERNAL SERVER ERROR</
DESCRIPTION>
<SEARCH_ID>10291102868755160031</SEARCH_ID>
<SEARCH_TYPE>Reverse_Phone</SEARCH_TYPE>
<COUNT>0</COUNT>
</INFO>
</RESULTS>
```

DENIED

```
<?xml version="1.0" encoding="UTF-8" standalone="yes"
?>
- <LISTINGS>
<VERSION>2.1</VERSION>
<STATUS>DENIED</STATUS>
<DESCRIPTION>IP not permitted. [111.11.1.11]</
DESCRIPTION>
</LISTINGS>
```

MULTIPLE CATEGORIES

```
<?xml version="1.0" encoding="UTF-8" standalone="yes" ?>
- <RESULTS>
- <INFO>
<VERSION>2.1</VERSION>
<STATUS>MULTIPLE CATEGORIES</STATUS>
<SEARCH_ID>10300570287485477963</SEARCH_ID>
<SEARCH_TYPE>Find_Business</SEARCH_TYPE>
<COUNT>2</COUNT>
</INFO>
- <LISTINGS>
- <LISTING>
<CODE>4473000001</CODE>
<DESCRIPTION>Tuxedos & Formal Wear</
DESCRIPTION>
<CODE_TYPE>CAT</CODE_TYPE>
</LISTING>
- <LISTING>
<CODE>4473001001</CODE>
<DESCRIPTION>Tuxedos Rental & Sales</
DESCRIPTION>
<CODE_TYPE>CAT</CODE_TYPE>
</LISTING>
</LISTINGS>
</RESULTS>
```

GEO_PRECISION Element Keys:

GEO_PRECISION

The Geo Precision field indicates the precision of the latitude/longitude data. A Geo Precision code of 0 represents the most accurate data while a code of 6 is least accurate.

<GEO_PREC>0</GEO_PREC>

GEO_PREC	DESCRIPTION
0	The roof top centroid. (address level)
1	The area center of the ZIP+4 centroid. (generally 8-12 households)
2	The area center of the ZIP sector (ZIP+2) centroid.
3	The center of population of the block group. (generally 200-500 households)
4	The center of population of the census tract. (generally 850-2000 households)
5	The area center of the input ZIP code.
6	No latitude/longitude could be determined.

Z4_TYPE

USPS Code for corresponding ZIP+4 listings

<Z4_TYPE>S</Z4_TYPE>

Z4 TYPE	DESCRIPTION
S	Street Address
H	High Rise
P	PO Box
R	Rural Route
G	General
F	Firm

XML Response DTD

The following DTD describes the format of the XML responses that can be obtained from API.

```
<!-- WhitePages Direct Access XML DTD --> <!-- version: 2.1 -->
<!DOCTYPE WHITEPAGES_API_VER_2.1 [
<!ELEMENT RESULTS ( INFO, LISTINGS? )>

<!-- standard informational data -->
<!ELEMENT INFO ( VERSION, STATUS, DESCRIPTION, SEARCH_ID, SEARCH_TYPE, COUNT,
TOTAL_RESULTS, NEXT_RESULTS, PREV_RESULTS ) >
<!ELEMENT VERSION ( #PCDATA ) >      <!-- API Version Number -->
<!ELEMENT STATUS ( #PCDATA ) >      <!-- Status Response Code (see pg TODO for Responses) -->
<!ELEMENT DESCRIPTION ( #PCDATA ) >

<!-- Details of Response Codes -->
<!ELEMENT SEARCH_ID ( #PCDATA ) >    <!-- Unique Search Identifier -->
<!ELEMENT SEARCH_TYPE ( #PCDATA ) >  <!-- Search Performed (see pg TODO for Search Types) -->
<!ELEMENT COUNT ( #PCDATA ) >       <!-- Count of Returned Listings -->
<!ELEMENT TOTAL_RESULTS ( #PCDATA ) > <!-- Count of Total Displayable Listings -->
<!ELEMENT NEXT_RESULTS ( #PCDATA ) > <!-- Next Page of Returned Listings -->
<!ELEMENT PREV_RESULTS ( #PCDATA ) > <!-- Previous Page of Returned Listings -->

<!-- total result section -->
<!ELEMENT LISTINGS ( LISTING+ ) >

<!-- individual listing section -->
<!ELEMENT LISTING ( LISTING | NAME | ADDRESS | PHONE | CARRIER | TYPE | AREACODE | SIC |
CATEGORY | GEO_EXTRA | CODE | DESCRIPTION | CODE_TYPE | LISTING_ID )* >

<!-- name data -->
<!ELEMENT NAME ( BUS, FIRST, FIRST_2, FIRST_3, FIRST_4, FIRST_5, FIRST_6, FIRST_7, LAST ) >
<!ELEMENT BUS ( #PCDATA ) >         <!-- Business Name -->
<!ELEMENT FIRST ( #PCDATA ) >      <!-- First Name -->
<!ELEMENT FIRST_2 ( #PCDATA ) >    <!-- First Name 2 -->
<!ELEMENT FIRST_3 ( #PCDATA ) >    <!-- First Name 3 -->
<!ELEMENT FIRST_4 ( #PCDATA ) >    <!-- First Name 4 -->
<!ELEMENT FIRST_5 ( #PCDATA ) >    <!-- First Name 5 -->
<!ELEMENT FIRST_6 ( #PCDATA ) >    <!-- First Name 6 -->
<!ELEMENT FIRST_7 ( #PCDATA ) >    <!-- First Name 7 -->
<!ELEMENT LAST ( #PCDATA ) >       <!-- Last Name -->

<!-- address data -->
<!ELEMENT ADDRESS ( NUM | STREET | ADDR2 | CITY | STATE | ZIP | ZIP4 | COUNTRY | DPC | CR )* >
<!ELEMENT NUM ( #PCDATA ) >        <!-- House or Street Number -->
<!ELEMENT STREET ( #PCDATA ) >     <!-- Street Name, pre and/or post directional, street type -->
<!ELEMENT ADDR2 ( #PCDATA ) >      <!-- Apt, Unit, Suite, etc -->
<!ELEMENT CITY ( #PCDATA ) >       <!-- City -->
<!ELEMENT STATE ( #PCDATA ) >      <!-- State or Province -->
<!ELEMENT ZIP ( #PCDATA ) >        <!-- ZIP or Postal Code -->
<!ELEMENT ZIP4 ( #PCDATA ) >       <!-- ZIP+4 -->
```

XML Response DTD

The following DTD describes the format of the XML responses that can be obtained from API.

```
<!-- ELEMENT COUNTRY ( #PCDATA ) >          <!-- Country -->
<!-- ELEMENT DPC ( #PCDATA ) >             <!-- Delivery Point Code -->
<!-- ELEMENT CR ( #PCDATA ) >              <!-- Carrier Route -->

<!-- phone data -->
<!-- ELEMENT PHONE ( #PCDATA ) >           <!-- 10 Digit Phone Number or 'NON-PUBLISHED' -->
<!-- ELEMENT CARRIER ( #PCDATA ) >       <!-- Phone Carrier or Service Provider -->
<!-- ELEMENT TYPE ( #PCDATA ) >           <!-- Phone Type -->
<!-- ELEMENT AREACODE ( #PCDATA ) >       <!-- NPA -->

<!-- Business SIC data (Standard Industrial Classification) -->
<!-- ELEMENT SIC ( SIC1 | SIC2 | SIC3 | SIC4 ) * >
<!-- ELEMENT SIC1 ( #PCDATA ) >           <!-- SIC Code -->
<!-- ELEMENT SIC2 ( #PCDATA ) >           <!-- SIC Code -->
<!-- ELEMENT SIC3 ( #PCDATA ) >           <!-- SIC Code -->
<!-- ELEMENT SIC4 ( #PCDATA ) >           <!-- SIC Code -->

<!-- Business Category data -->
<!-- ELEMENT CATEGORY ( YP_HEADER1 ) >
<!-- ELEMENT YP_HEADER1 ( #PCDATA ) >     <!-- Yellow Page Header -->

<!-- Geo coding -->
<!-- ELEMENT GEO_EXTRA ( LATITUDE | LONGITUDE | FIPS | MSA | Z4_TYPE | GEO_PREC ) * >
<!-- ELEMENT LATITUDE ( #PCDATA ) >
<!-- ELEMENT LONGITUDE ( #PCDATA ) >
<!-- ELEMENT FIPS ( #PCDATA ) >
<!-- ELEMENT MSA ( #PCDATA ) >
<!-- ELEMENT Z4_TYPE ( #PCDATA ) >
<!-- ELEMENT GEO_PREC ( #PCDATA ) >

<!-- Code -->
<!-- ELEMENT CODE ( #PCDATA ) >           <!-- 10 digit Business Category ID or 8 digit SIC ID -->
<!-- ELEMENT DESCRIPTION ( #PCDATA ) >    <!-- Business Category or SIC description -->
<!-- ELEMENT CODE_TYPE ( #PCDATA ) >     <!-- Code Type (Business Category (CAT) or SIC Code (SIC)) -->

<!-- ELEMENT LISTING_ID ( #PCDATA ) >

|>
```

ADMINISTRATION, REPORTING, AND TECHNICAL SUPPORT

Clients have access to Administrative and Reporting tools directly on-line. You can add or remove IP Addresses from your authorized list, add or remove users and view API usage reports via our Account Center.

Administration (IP Authentication)

To add or remove IP Addresses, login to your WhitePages PRO account at <https://www.pro.whitepages.com>

- Click the “EnterpriseDA” link in the sub-navigation – a new window will open
- Click on “Administration Console”
- Click “Authentication and Security”
- Click “IP Authentication”

Reporting

To access usage reports, login to your WhitePages PRO account at <https://www.pro.whitepages.com>

- Click the “Reports” link in the sub-navigation
- Select your reporting criteria

Technical Support

For technical support, please write to us at support@pro.whitepages.com or give us a call at 800.336.1327. Support is available Monday-Friday, 8:00-5:00 Pacific Time.