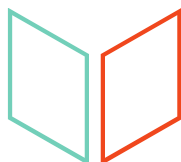




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GIS Web Services

Geocoding web service - MAN

Web Services guide (EN)

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1. Introduction

This document describes two web services:

1. **Geocoding web service**, for finding and georeferencing addresses, with the possibility to display the addresses on a map;
2. **Validation web service**, for address validation.

2. Geocoding web service

Use the geocoding web service to find one or more addresses, get the coordinates of the addresses and display them on a map.

The geocoding web service has a REST interface and JSON output.

URL	http://sitmappe.comune.bologna.it/searchAddress/services/search
Method	GET
Output media type	application/JSON

2.1. Input

Parameter	Description	Mandatory
address	Address or addresses to find. More addresses separated by \$.	Yes
out_sr	Spatial Reference System for output coordinates. Allowed values: <ul style="list-style-type: none"> • UTMRER, • UTMA, • WGS1984, • WEB_MERCATOR. Default: UTMRER	No
map_type	Type of map. Allowed values: <ul style="list-style-type: none"> • S (Street), • A (Aerial), • N (no map). Default: N	No
map_height	Map height (pixel). Default: 400	No
map_width	Map width (pixel). Default: 400	No
label	Show address label on the map. Allowed values: address Default: <null>	No

2.2. Output

The geocoding web service returns one or more addresses, and for each address the

following information:

- address (normalized full address);
- coordinates;
- map URL (with label, if required). In case of multiple addresses search, only one URL is returned and the map shows all addresses.

Example - single address search (via giuseppe garibaldi, 1)

```
{
  "spatialReference":{"wkid":4326},
  "results":[
    {
      "address":"VIA GIUSEPPE GARIBALDI, 1",
      "location":{"x":11.34377515600005,"y":44.48999453000005},
      "url": <URL>
    },
    {
      "address":"VIA GIUSEPPE GARIBALDI, 1/D",
      "location":{"x":11.34373825800003,"y":44.489917957000046},
      "url": <URL>
    },
    {
      "address":"VIA GIUSEPPE GARIBALDI, 1/C",
      "location":{"x":11.343750598000042,"y":44.489943451000045},
      "url": <URL>
    }
  ]
}
```

Example - multiple addresses search (via giuseppe garibaldi, 1 \$ viale mazzini \$ via roma).

```
{
  "spatialReference":{"wkid":4326},
  "results":[
    {
      "searchString":"VIA GIUSEPPE GARIBALDI, 1",
      "address":"VIA GIUSEPPE GARIBALDI, 1",
      "location":{"x":11.34377515600005,"y":44.48999453000005}
    },
    {
      "searchString":"VIALE MAZZINI",
      "address":"VIALE MAZZINI",
      "location":{"x":11.34373825800003,"y":44.489917957000046}
    },
    {
      "searchString":"VIA ROMA",
      "address":"VIALE ROMA",
      "location":{"x":11.343750598000042,"y":44.489943451000045},
    },
  ],
  "map_url":<URL>
}
```

3. Validation web service

Use the validation web service to verify the existence of one or more addresses and get *zona* (area), *quartiere* (district), *ambito RUE* (Urban Building Regulation scope).

Addresses can be displayed on a map, along with *zona*, *quartiere*, *ambito RUE*.

The geocoding web service has a REST interface and JSON output.

URL	http://sitmappe.comune.bologna.it/searchAddress/services/validate
Method	GET
Output media type	application/JSON

3.1. Input

Parameter	Description	Mandatory
address	Address or addresses to validate. More addresses separated by \$.	yes
out_fields	List of fields to be returned, separated by commas. Allowed values: <ul style="list-style-type: none"> • ambito (Urban Building Regulation scope) • quartiere (district) • zona (area) Default: <i><null></i>	No
map_type	Type of map. Allowed values: <ul style="list-style-type: none"> • S (Street), • A (Aerial), • N (no map). Default: N	No
map_height	Map height (pixel). Default: 400	No
map_width	Map width (pixel). Default: 400	No
label	Labels to display on the map, separated by commas. Allowed values: <ul style="list-style-type: none"> • address • ambito • quartiere • zona Default: <i><null></i> In order to display <i>zona</i> , <i>ambito</i> and <i>quartiere</i> , you must also set the <i>highlight</i> parameter (see below).	
highlight	List of items to display on map, separated by commas. Allowed values:	No

	<ul style="list-style-type: none"> • ambito • quartiere • zona <p>Default: <null></p>	
--	------------------------------------------------------------------------------------------------------------------------------	--

3.2. Output

The validation web service returns one or more addresses, and for each address the following information:

- address (normalized full address);
- ambito RUE (Urban Building Regulation scope - name and number);
- quartiere (district);
- zona (area);
- map URL (with label, if required). In case of multiple addresses validation, only one URL is returned and the map shows all addresses.

Example - single address (via giuseppe garibaldi, 1)

```
{
  "spatialReference" : <SR>,
  "results": [
    {
      "zona": "Galvani",
      "quartiere": "Santo Stefano",
      "ambito": "Nucleo antico",
      "address": "VIA GIUSEPPE GARIBALDI, 1",
      "location": { "x": 686419.34999999996, "y": 929240.72000000007 }
      "url": <URL>
    },
    ...
  ]
}
```

Example - multiple addresses

```
{
  "spatialReference": <SR>,
  "results": [
    {
      "zona": "Galvani",
      "quartiere": "Santo Stefano",
      "ambito": "Nucleo antico",
      "searchString": "VIA GIUSEPPE GARIBALDI, 1",
      "address": "VIA GIUSEPPE GARIBALDI, 1",

```

```
    "location":{"x":11.34377515600005,"y":44.48999453000005}  
  },  
  ...  
],  
"map_url":<URL>  
}
```