Informatica Cloud

Google Geocode Connector

September 2018

Overview:

The Google Geocoding API converts street addresses into geographic coordinates, such as latitude and longitude and also offers “reverse” geocoding, converting geographic coordinates into human-readable addresses. Geocoding is often used to provide input to identify locations on a mapping service or to calculate routes. The Google Geocode Connector package enables Informatica Intelligent Cloud Services (IICS) developers to easily incorporate Google geocoding and reverse geocoding into their Cloud Application Integration projects.

For example, “1600 Pennsylvania Avenue, Washington DC”, returns the latitude and longitude values of 38.8976633 and -77.0365739, and the full address of "1600 Pennsylvania Ave NW, Washington, DC 20500, USA"

Prerequisites:

- Google Geocode Connector package
- Google Geocode API Key
- Appropriate role/permissions on Informatica Intelligent Cloud Service to perform an IMPORT operation

Use Case: Generate Plus Codes for a given address

The process is invoked by passing in a single string containing an address, with fields separated by commas or semicolons. Google processes the address and returns longitude and latitude values. Those values are used in a second invocation of the Google Geocode API that generates the Global Code and the Compound Code.

1. Invoke with a valid street address
2. Results of the geocoding address lookup
    a. Latitude, Longitude
    b. Compound Code
    c. Global Code
    d. Full U.S. Postal Service street address with postal code

Quick Setup

1. Download the GoogleGeocodeConnectorPackage-0918.zip from the Informatica CAI Github Repository.
2. Import the package into your CAI workspace
3. After the import is complete, you will have a project named “Google Geocode” with three assets
    a. “Google Geocode API” Service Connector
    b. Google-Geocode-API-actions Connection
    c. “Generate Plus Codes from street address” Process
4. Publish the “Google Geocode API” Service Connector
5. Open the Google-Geocode-API-actions Connection
    a. Insert your Geocode API key into the “Value” for the “key” Connection Property under the Properties tab
    b. Save the Connection
    c. Publish the Connection
6. Publish the “Generate Plus Codes from street address” Process
7. Test the process in your REST tool of choice (Postman, Insomnia, RESTed, etc.)
    a. Define a POST operation with a raw body of type “JSON (application/json)”
    b. Use the service address from the published “Generate Plus Codes from street address” process
    c. Use JSON-encoded input
        i. address_input – comma or semicolon separated street address

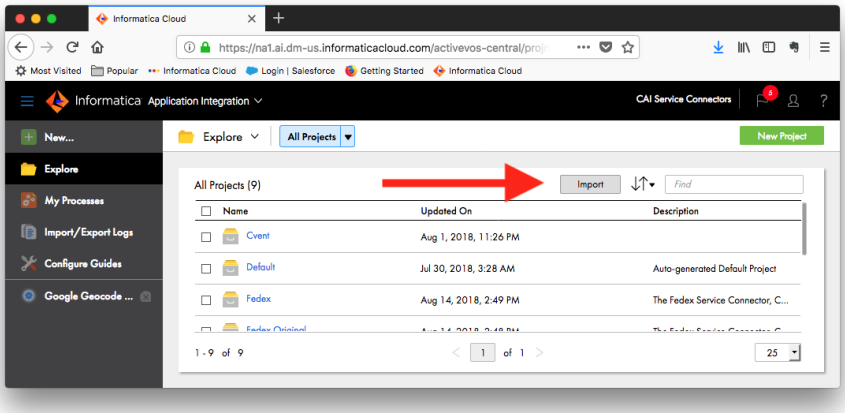
```
{
 "address_input": "1600 Pennsylvania Ave, Washington DC"
}
```

    d. Get a result with latitude and longitude values, a corresponding global code and compound code, and the U.S. Postal Service formatted address with postal code
        i.

```
{
 "LatLngOUT": "38.8976633, -77.0365739",
 "Longitude_out": -77.0365739,
“GlobalCodeOUT": "87C4VXX7+39
 "CompoundCodeOUT": "VXX7+39 Washington, DC, USA"
"StreetAddressOUT": "1600 Pennsylvania Ave NW, Washington, DC 20500, USA"
}
```

Detailed Setup

1. Download the GoogleGeocodeConnectorPackage-0918.zip from the Informatica CAI Github Repository.
2. Import the package into your CAI workspace



3. After the import is complete, you will have a project named “Google Geocode” with three assets
    a. “Google Geocode API” Service Connector
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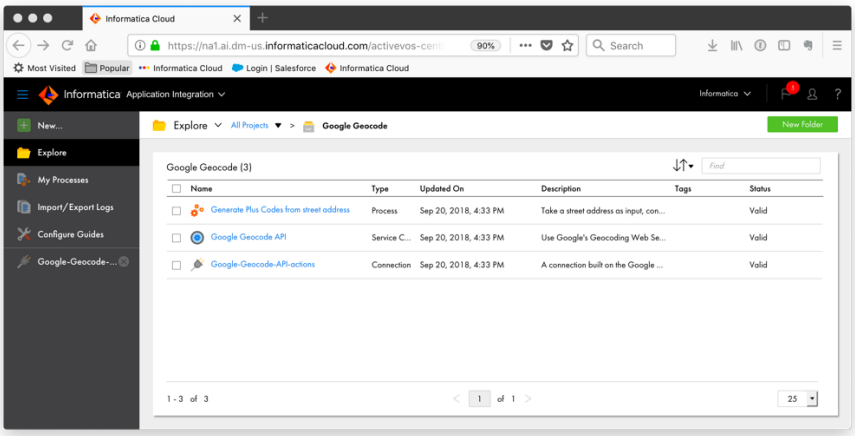
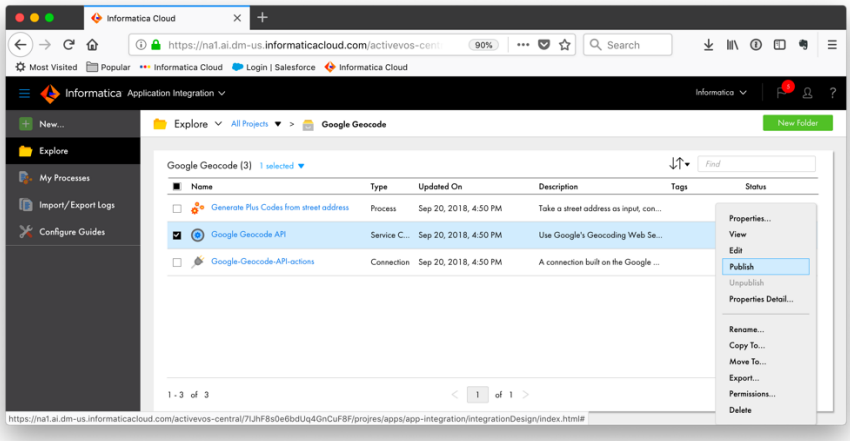
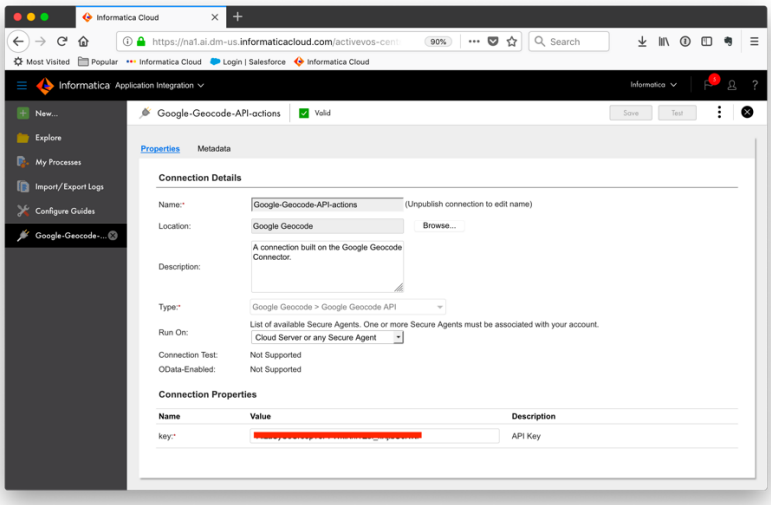


4. Publish the “Google Geocode API” Service Connector

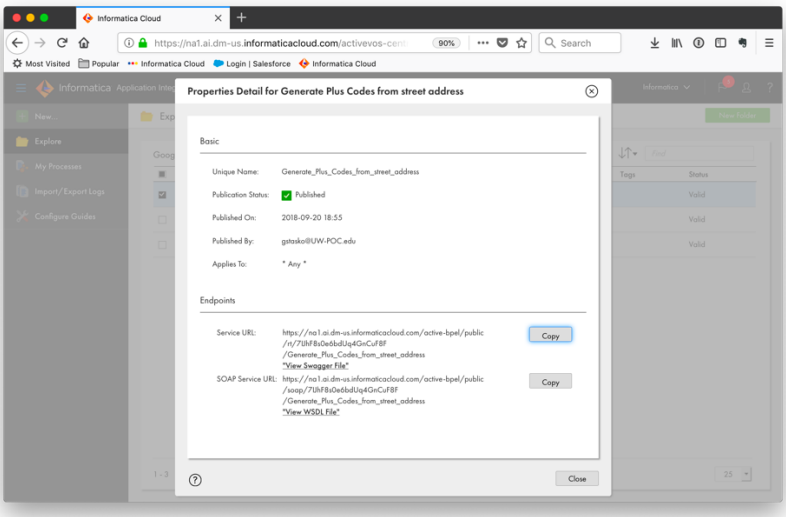


5. Open the Google-Geocode-API-actions Connection
    a. Insert your Geocode API key into the “Value” for the “key” Connection Property under the Properties tab



    b. Save the Connection
    c. Publish the Connection
6. Publish the “Generate Plus Codes from street address” Process

7. Test the process in your REST tool of choice (Postman, Insomnia, RESTed, etc.)
    a. Define a POST operation with a raw body of type “JSON (application/json)”
    b. Use the service address from the published “Generate Plus Codes from street address” process.



    c. Use JSON-encoded input
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{
 "address_input": "1600 Pennsylvania Ave, Washington DC"
}
```

    d. Get a result with latitude and longitude values, a corresponding global code and compound code, and the U.S. Postal Service formatted address with postal code
        i.

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 "Longitude_out": -77.0365739,
“GlobalCodeOUT": "87C4VXX7+39
 "CompoundCodeOUT": "VXX7+39 Washington, DC, USA"
"StreetAddressOUT": "1600 Pennsylvania Ave NW, Washington, DC 20500, USA"
}
```

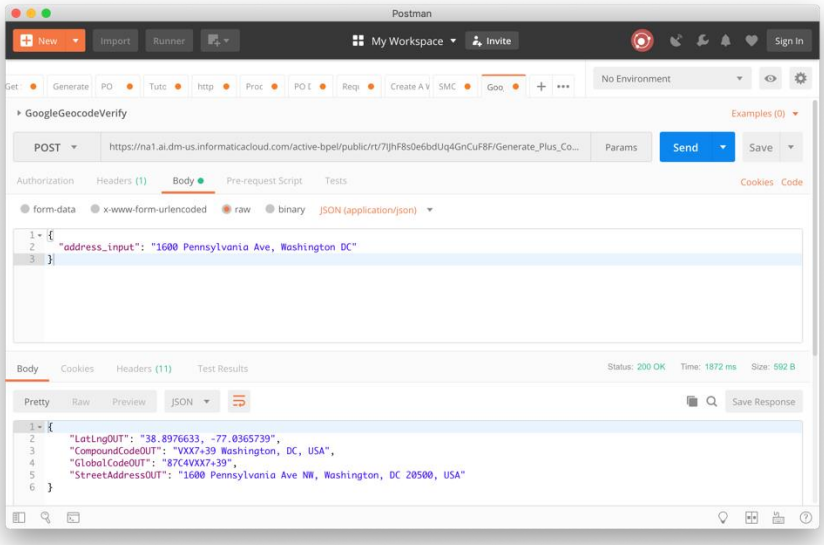
Postman
New
Import
Runner
My Workspace
Invite
Sign In
No Environment
GoogleGeocodeVerify
Examples (0)
POST
https://na1.ai.dm-us.informaticacloud.com/active-bpel/public/rt/7lJhF8s0e6bdUq4GnCuF8F/Generate_Plus_Co...
Params
Send
Save
Authorization
Headers (1)
Body
Pre-request Script
Tests
Cookies
Code
form-data
x-www-form-urlencoded
raw
binary
JSON (application/json)
{
"address_input": "1600 Pennsylvania Ave, Washington DC"
}
Body
Cookies
Headers (11)
Test Results
Status: 200 OK
Time: 1872 ms
Size: 592 B
Pretty
Raw
Preview
JSON
Save Response
{
"LatLngOUT": "38.8976633, -77.0365739",
"CompoundCodeOUT": "VXX7+39 Washington, DC, USA",
"GlobalCodeOUT": "87C4VXX7+39",
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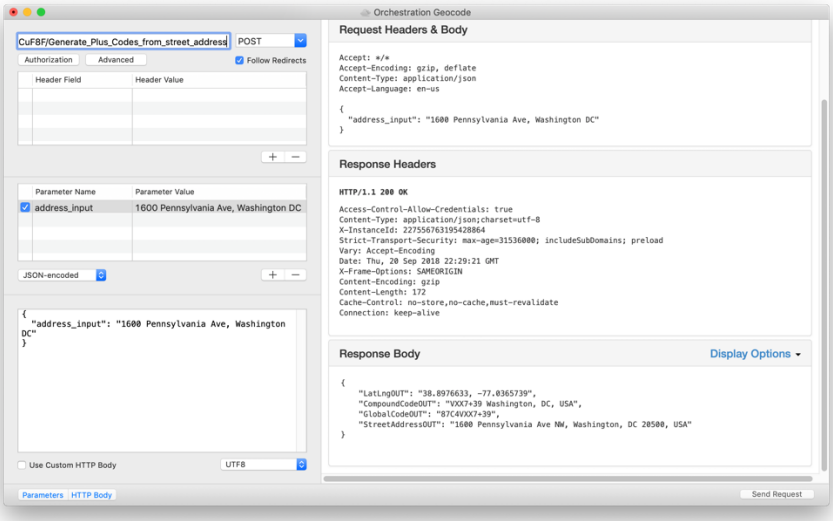
Orchestration Geocode
CuF8F/Generate_Plus_Codes_from_street_address
POST
Authorization
Advanced
Follow Redirects
Header Field
Header Value
Parameter Name
Parameter Value
address_input
1600 Pennsylvania Ave, Washington DC
JSON-encoded
{
"address_input": "1600 Pennsylvania Ave, Washington DC"
}
Use Custom HTTP Body
UTF8
Parameters
HTTP Body
Send Request
Request Headers & Body
Accept: */*
Accept-Encoding: gzip, deflate
Content-Type: application/json
Accept-Language: en-us
{
"address_input": "1600 Pennsylvania Ave, Washington DC"
}
Response Headers
HTTP/1.1 200 OK
Access-Control-Allow-Credentials: true
Content-Type: application/json;charset=utf-8
X-InstanceId: 2275567631954288 64
Strict-Transport-Security: max-age=31536000; includeSubDomains; preload
Vary: Accept-Encoding
Date: Thu, 20 Sep 2018 22:29:21 GMT
X-Frame-Options: SAMEORIGIN
Content-Encoding: gzip
Content-Length: 172
Cache-Control: no-store,no-cache,must-revalidate
Connection: keep-alive
Response Body
Display Options
{
"LatLngOUT": "38.8976633, -77.0365739",
"CompoundCodeOUT": "VXX7+39 Washington, DC, USA",
"GlobalCodeOUT": "87C4VXX7+39",
"StreetAddressOUT": "1600 Pennsylvania Ave NW, Washington, DC 20500, USA"
}