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# **django-terra-geocrud**

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A backend stored and API configuration for Geographic CRUD. Designed to work with [terra-admin](<https://github.com/Terralego/terra-admin>) CRUD module, but can be used with any frontend.



### 1.1 Requirements

Should match with [django-geostore](<https://django-geostore.readthedocs.io/en/latest/installation.html#requirements>) requirements

### 1.2 With pip

From Pypi:

```
pip install django-terra-geocrud
```

From Github:

```
pip install -e https://github.com/Terralego/django-terra-geocrud.git@master  
↪ #egg=django-terra-geocrud
```

### 1.3 With git

```
git clone https://github.com/Terralego/django-terra-geocrud.git  
cd django_terra_geocrud  
python setup.py install
```





## CHAPTER 2

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### Configuration

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In your project :

- settings

```
INSTALLED_APPS = [
    ...
    # apps required by CRUD
    'geostore', # store geographic data
    'template_model', # store template in model
    'template_engines', # generate odt and docx templates
    'rest_framework', # if you want to try api HTML interface
    'django_json_widget', # if you want to use django admin
    'reversion', # used to store every change on data (run ./manage.py_
    ↪ createinitialrevisions first)
    # CRUD app
    'terra_geocrud',
    ...
]
...
TEMPLATES = [
    ...
    # if you want to render odt templates
    {'BACKEND': 'template_engines.backends.odt.OdtEngine'},
    # if you want to render docx templates
    {'BACKEND': 'template_engines.backends.docx.DocxEngine'},
]
```

- urls

```
urlpatterns = [
    ...
    # some urls in geostore are required by geocrud
    path('api/geostore/', include('geostore.urls')),
    path('api/crud/', include('terra_geocrud.urls')),
]
```

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```
...
]
```

You can customize default url and namespace by including `terra_geocrud.views` directly

Run migrations

```
./manage.py migrate
```

- ADMIN :

you can disable and / or customize admin

- SETTINGS :

Waiting for settings definition directly in models.

Settings should be overridden with `TERRA_GEOCRUD` settings in your project settings file:

```
...
TERRA_GEOCRUD = {
    # default value for map extent. API serialize this for layer extent if there is_
    ↪no features in it (as default)
    'EXTENT': [-90.0, -180.0, 90.0, 180.0],
    # default storage for file stored in json properties. It is recommended to_
    ↪configure a private web storage in your project (as S3Storage -> see django-
    ↪storages)
    'DATA_FILE_STORAGE_CLASS': 'django.core.files.storage.FileSystemStorage',
    # default mapbox style provided by api if no custom style defined in crud view
    'STYLES': {
        'line': {
            'type': 'line',
            'paint': {
                'line-color': '#000',
                'line-width': 3
            }
        },
        'point': {
            'type': 'circle',
            'paint': {
                'circle-color': '#000',
                'circle-radius': 8
            }
        },
        'polygon': {
            'type': 'fill',
            'paint': {
                'fill-color': '#000'
            }
        },
    },
}
...
```

- If you want to generate map on your template with the geometry of your feature, and/or extra features, you should use `mbglrenderer`.

Check <https://github.com/consbio/mbgl-renderer>.

Change the url in the settings to use your instance of `mbglrenderer` :

```
MBGLRENDERER_URL = 'http://mbglrenderer'
```



## CHAPTER 3

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### Example of use

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- TERRA\_GEOCRUD provide its own settings url to terralego apps via `/api/settings`

like:

```
{
  "modules": {
    "CRUD": {
      "settings": "/api/crud/settings/"
    }
  }
}
```

Settings provide default config values, and formatted list of crud group and views, ready to be displayed in frontend left menu.

- There are 4 endpoint in GEOCRUD API:

:: `settings/` -> get ordered menu with views classified by group or not, and basic map settings groups/ -> manage groups of CRUD views  
`views/` -> manage CRUD views (a view creation create its associated layer) template/<template\_pk>/render/<pk>/ -> fill a template with a feature

- A command is available to create default views for each existing layer

```
./manage.py create_default_crud_views
```

- **START GUIDE**

- First, you need to create crud views for your geostore layers with the command or the admin.
- These views can be grouped, and will be listed by the frontend api
- Then, you can customize default layer-schema by providing your own property groups, which will groups properties as json schema nested objects.

#### ## ADMIN

- Some classes are provided to help you to manage Crud views / groups / layers and feature through django admin.

- You need to register your wanted ModelAdmin in your project

## ## TEMPLATES

- Check <https://github.com/Terralego/django-template-engines> to create your own template.
- In addition to the ODTEngine and DocXEngine, for odt only, you can add maps of layers with features and extra\_features. Use :

```
{% load map_tags %}
{% map_image_url_loader feature_included=True extra_features="Extra_
↔feature_slug,Extra_feature_2_slug"
base_layer="mapbox_baselayer_slug" %}
```

You can use the other tags : width, height, anchor.