
Django Inelastic Models Documentation

Release 8.0.0.dev4

PSU OIT Web & Mobile Team

Apr 25, 2025

Contents

| | | |
|----------|-------------------------|----------|
| 1 | Introduction | 1 |
| 1.1 | Compatibility | 1 |
| 1.2 | Usage | 2 |
| 1.3 | Tests | 2 |
| 2 | Changelog | 3 |
| 2.1 | 8.0 | 3 |
| 2.2 | 7.1 | 3 |
| 2.3 | 7.0 | 3 |
| 2.4 | 1.5 | 4 |
| 2.5 | 1.4 | 4 |
| 2.6 | 1.3 | 4 |
| 2.7 | 1.2 | 4 |
| 2.8 | 1.1 | 4 |
| 2.9 | 1.0 | 4 |

This package provides a small library for declaratively specifying indexes for [Django](#) models using an [Elasticsearch](#) backend.

It requires Django, [elasticsearch-dsl](#) and an available Elasticsearch instance.

1.1 Compatibility

The following compatibility matrix summarizes supported versions of the *Elasticsearch* engine.

| | ES 1.X | ES 2.X | ES 5.X | ES 6.X | ES 7.X | ES 8.X |
|-----|--------|--------|----------------|----------------|--------|----------------|
| 1.0 | Y | N | N | N | N | N |
| 1.1 | Y | N | N | N | N | N |
| 1.2 | N | Y | N | N | N | N |
| 7.0 | N | N | ? ¹ | ? ¹ | Y | ? ¹ |
| 8.0 | N | N | N | N | N | Y |

Releases prior to 7.0 unofficially supported a variety of Django release series and did not explicitly indicate supported combinations. No official support or guidance is given for these releases.

| | Django 3.2 | Django 4.2 |
|-----|------------|------------|
| 7.0 | Y | N |
| 8.0 | Y | planned |

¹ Compatibility is possible but not officially supported.

1.2 Usage

1. Add `inelastic_models` to `INSTALLED_APPS`.
2. Mixin the type `inelastic_models.indexes.SearchMixin` to your models.
3. Implement a type `inelastic_models.indexes.Search` and bind it to models:

```
from .models import Foo

class FooIndex(Search):
    attribute_fields = ('foo', 'baz')

FooIndex.bind_to_model(Foo)
```

You must define `ELASTICSEARCH_CONNECTIONS`. Pass index and connection parameters to the generated indices and the underlying Elasticsearch instance via the `INDEX_OPTIONS` and `CONNECTION_OPTIONS` mappings, respectively:

```
ELASTICSEARCH_CONNECTIONS = {
    'default': {
        'HOSTS': ['http://localhost:9200'],
        'INDEX_NAME': 'inelastic_models',
        'INDEX_OPTIONS': {
            'number_of_replicas': 3
        },
        'CONNECTION_OPTIONS': {
            'timeout': 42,
            'retry_on_timeout': True
        }
    }
},
```

1.3 Tests

Run tests using the `make` rule:

```
make test [venv=<path>] [python=<python executable name, e.g., 'python3.5'>]
```

It is assumed that you have an Elasticsearch index available at `elasticsearch:9200` and that `virtualenv` available on your path.

2.1 8.0

2025-04-24

This release adds support for, and requires:

- Elasticsearch 8.x.
- elasticsearch-py >=8.18.0
- Django 4.2 LTS.

2.2 7.1

2022-06-08

This release requires the use of the Django 3.2 LTS.

2.3 7.0

2021-11-23

This release adds support for, and requires, the use of ES 7.x.

This release marks a departure from the previous release strategy. To reduce confusion and to provide better support for a variety of Elasticsearch installations, releases will follow the major ES release versions as is done with the ‘elasticsearch-py’ and the ‘elasticsearch-dsl-py’ packages.

- Uses analyzer, tokenizer constructions compatible with ES >= 5.0
- Replaces the use of the ‘string’ type field with ‘text’ [ES>=5.0].
- Removes use of ‘flush’ API [ES>=6].
- Removes support for Python 2 and related compatibility shims.

- Replaces deprecated ngram type names [ES>=8.0].
- Revises index construction to support mapping type removal [ES>=8.0].
- Adds new field 'KitchenSinkField' to replace the functionality of the historical '_all' index field [ES>=6.0].

2.4 1.5

2020-02-27

- Fixes exception handling during chunked indexing.
- Improves performance of 'bulk_prune' operation.
- Fixes erroneous dict modification during iteration.
- Adds missing assertions, guards for empty index requests.
- Adds support for WDT PYPI instance.

2.5 1.4

- Adds explicit support for translated fields.
- Replaces uses of print function.
- Uses memory-efficient record iteration for bulk operations.

2.6 1.3

- Adds support for connection parameter configuration via 'ELASTICSEARCH_CONNECTIONS'.

2.7 1.2

- Enforces a one-to-one relation between Elasticsearch indices and mappings in order to simplify implementation and behavior.
- Retargets to the Elasticsearch 2.x release series.
- Revises incorrect test case specifications.
- Adds new index API 'Search.check_mapping'.
- Adds new management command 'migrate_index'.

2.8 1.1

Adds explicit index-binding.

2.9 1.0

The initial pre-release which serves to replicate 'oro.search' as an external package.