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# **Django Inelastic Models Documentation**

***Release 8.0.0***

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## Contents

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<b>1</b>	<b>Introduction</b>	<b>1</b>
1.1	Compatibility . . . . .	1
1.2	Usage . . . . .	2
1.3	Tests . . . . .	2
<b>2</b>	<b>Changelog</b>	<b>3</b>
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 . . . . .	5
2.9	1.0 . . . . .	5



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	? <sup>1</sup>	? <sup>1</sup>	Y	? <sup>1</sup>
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

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<sup>1</sup> 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

2025-05-08

This release adds support for, and requires:

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

This release significantly refactors indexing operations and code paths such that:

- reindexing requests are now validated using a builtin evaluator which determines whether or not the index corresponding to a given index should be considered dirty.
- index dependencies are now more rigorously computed as a dependency tree and updates are now properly dispatched to dependent indices.
- additional interfaces have been added to the ‘Search’ object in order to allow implementations to provide custom logic when considering index updates and dependency dispatching.

### 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  $\geq 5.0$
- Replaces the use of the ‘string’ type field with ‘text’ [ES $\geq 5.0$ ].
- Removes use of ‘flush’ API [ES $\geq 6$ ].
- Removes support for Python 2 and related compatibility shims.
- Replaces deprecated ngram type names [ES $\geq 8.0$ ].
- Revises index construction to support mapping type removal [ES $\geq 8.0$ ].
- Adds new field ‘KitchenSinkField’ to replace the functionality of the historical ‘\_all’ index field [ES $\geq 6.0$ ].

## 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.