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# **dlstats**

***Release 0.8.6***

**Jul 05, 2017**



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## Contents

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# CHAPTER 1

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## Resume

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**Licence** BSD ?

**Repository** <https://git.nomics.world/dbnomics/dlstats>

**Tickets** <https://git.nomics.world/dbnomics/dlstats/issues>

**Doc** <http://widukind-dlstats.readthedocs.org/en/latest/>



## What is a dlstats?

This python module retrieves times series from the major statistical offices (Eurostat, World Bank, european statistical officesdots) and records those series in a pyMongo database. MongoDB allows to download the data using a REST interface. Widukind provides a graphical client, and a set of functions for Matlab, R, Excel and pandas.

## API

### Fetchers Commons

#### Fetcher

#### DlstatsCollection

#### Providers

#### Categories

#### Datasets

#### Series

Changed in version 0.3.0: Remove Inherit DlstatsCollection

## CodeDict

### dlstats.fetchers.bea

### dlstats.fetchers.bis

```
dlstats.fetchers.bis.extract_zip_file()
```

```
dlstats.fetchers.bis.csv_dict()
```

```
dlstats.fetchers.bis.local_read_csv()
```

## All Fetchers

### dlstats.fetchers.ecb

### dlstats.fetchers.esri

### dlstats.fetchers.eurostat

### dlstats.fetchers.fed

### dlstats.fetchers.imf

### dlstats.fetchers.insee

### dlstats.fetchers.oecd

### dlstats.fetchers.world\_bank

## Commands

## Environment

Les variables d'environnement peuvent être utilisés pour définir la valeur des options de la ligne de commande.

Toutes les variables de l'application, commence par **DLSTATS\_**

### Example:

```
$ DLSTATS_DEBUG=True dlstats fetchers run -v -S -f BIS

# Or:

$ export DLSTATS_DEBUG=True
$ dlstats fetchers run -v -S -f BIS

# Is the same as:

$ dlstats fetchers run --debug -v -S -f BIS
```



## dlstats.client

```
$ dlstats --help

Usage: dlstats [OPTIONS] COMMAND [ARGS]...

Options:
  --version  Show the version and exit.
  --help     Show this message and exit.

Commands:
  export      Export File commands.
  fetchers    Fetchers commands.
  mongo       MongoDB commands.
```

## dlstats fetchers

```
$ dlstats fetchers --help

Usage: dlstats fetchers [OPTIONS] COMMAND [ARGS]...

  Fetchers commands.

Options:
  --help  Show this message and exit.

Commands:
  calendar  Display calendar for this provider
  datasets  Show datasets list
  datatree  Create or Update fetcher Data-Tree
  list      Show fetchers list
  report    Fetchers report
  run       Run Fetcher - All datasets or selected...
  search    Search in Series
  tags      Create or Update field tags
```

## fetchers calendar

```
$ dlstats fetchers calendar --help

Usage: dlstats fetchers calendar [OPTIONS]

  Display calendar for this provider

Options:
  -v, --verbose                Enables verbose mode.
  -D, --debug
  -l, --log-level [DEBUG|WARN|ERROR|INFO|CRITICAL]
                                Logging level [default: ERROR]
  --log-config PATH            Logging config filepath
  --mongo-url TEXT             URL for MongoDB connection. [default:
                                mongodb://localhost/widukind]
  -f, --fetcher [BIS|ESRI|EUROSTAT|FED|ECB|IMF|INSEE]
```

```
--help                               Fetcher choice [required]
                                      Show this message and exit.
```

### Example

```
$ dlstats fetchers calendar -f ECB
```

```
-----
↪-----
Provider      | Dataset      | Action          | Type   | Date (yyyy-mm-dd hh:mn)
-----
↪-----
ECB           | TGB          | update_node     | date   | 2016-02-01 - 10:00
ECB           | MIR          | update_node     | date   | 2016-02-04 - 10:00
ECB           | STP          | update_node     | date   | 2016-02-05 - 14:00
ECB           | EXR          | update_node     | date   | 2016-02-08 - 10:00
ECB           | SEC          | update_node     | date   | 2016-02-10 - 10:00
-----
↪-----
```

### fetchers datasets

```
$ dlstats fetchers datasets

Usage: dlstats fetchers datasets [OPTIONS]

    Show datasets list

Options:
  -f, --fetcher [BIS|ESRI|EUROSTAT|FED|ECB|IMF|INSEE]
                                      Fetcher choice [required]
  --help                               Show this message and exit.
```

### Example

```
$ dlstats fetchers datasets -f FED
```

```
CHGDEL CHGDEL - Charge-off and Delinquency Rates
CP CP - Commercial Paper
E2 E.2 - Survey of Terms of Business Lending
FOR FOR - Household Debt Service and Financial Obligations Ratios
G17 G.17 - Industrial Production and Capacity Utilization
G19 G.19 - Consumer Credit
G20 G.20 - Finance Companies
H10 G.5 / H.10 - Foreign Exchange Rates
H15 H.15 - Selected Interest Rates
H3 H.3 - Aggregate Reserves of Depository Institution and the Monetary Base
H41 H.4.1 - Factors Affecting Reserve Balances
H6 H.6 - Money Stock Measures
H8 H.8 - Assets and Liabilities of Commercial Banks in the U.S.
PRATES PRATES - Policy Rates
SLOOS SLOOS - Senior Loan Officer Opinion Survey on Bank Lending Practices
Z1 Z.1 - Financial Accounts of the United States
```

## fetchers datatree

```
Usage: dlstats fetchers datatree [OPTIONS]

Create or Update fetcher Data-Tree

Options:
  -v, --verbose           Enables verbose mode.
  -S, --silent            Suppress confirm
  -D, --debug
  -l, --log-level [DEBUG|WARN|ERROR|INFO|CRITICAL]
                        Logging level [default: ERROR]
  --log-config PATH       Logging config filepath
  --mongo-url TEXT        URL for MongoDB connection. [default:
                        mongodb://localhost/widukind]
  --force                Force update
  -f, --fetcher [INSEE|IMF|EUROSTAT|BIS|ESRI|ECB|FED]
                        Fetcher choice [required]
  --help                 Show this message and exit.
```

## fetchers list

```
$ dlstats fetchers list
```

```
-----
INSEE
IMF
ECB
EUROSTAT
BIS
FED
ESRI
-----
```

## fetchers report

```
$ dlstats fetchers report --help

Usage: dlstats fetchers report [OPTIONS]

Fetchers report

Options:
  --mongo-url TEXT        URL for MongoDB connection. [default:
                        mongodb://localhost/widukind]
  -f, --fetcher [EUROSTAT|IMF|ESRI|INSEE|BIS|FED|ECB]
                        Fetcher choice
  --help                 Show this message and exit.
```

## Example

```
$ dlstats fetchers report
```

```

MongoDB: mongodb://localhost/widukind :

```

Provider	Ver.	Dataset	Series	Last Update	
First Download		last Download			
ECB	4	EXR	10675	2016-01-27	
↪2016-01-27 - 17:21		↪2016-01-27 - 17:21			
INSEE	3	IPAMPA-2010	300	2016-01-28	
↪2016-01-28 - 12:53		↪2016-01-28 - 12:53			
INSEE	3	IPC-1970-1980-ALIM	236	2016-01-28	
↪2016-01-28 - 12:53		↪2016-01-28 - 12:53			
INSEE	3	IPC-1970-1980-MANUF	159	2016-01-28	
↪2016-01-28 - 12:53		↪2016-01-28 - 12:53			
INSEE	3	IPC-1970-1980-SERV	130	2016-01-28	
↪2016-01-28 - 12:53		↪2016-01-28 - 12:53			
INSEE	3	IPC-1980-PDET	98	2016-01-28	
↪2016-01-28 - 12:54		↪2016-01-28 - 12:54			
INSEE	3	IPI-2010-A21	20	2016-01-27	
↪2016-01-27 - 16:58		↪2016-01-27 - 16:58			
ECB	4	EXR	10675	2016-01-27	
↪2016-01-27 - 17:21		↪2016-01-27 - 17:21			
FED	2	CHGDEL	264	2016-01-28	
↪2016-01-28 - 18:33		↪2016-01-28 - 18:35			
FED	2	CP	64	2016-01-28	
↪2016-01-28 - 17:16		↪2016-01-28 - 18:35			
FED	2	E2	2425	2016-01-28	
↪2016-01-28 - 17:17		↪2016-01-28 - 18:35			
FED	2	FOR	4	2016-01-28	
↪2016-01-28 - 17:17		↪2016-01-28 - 18:35			
FED	2	G17	2498	2016-01-28	
↪2016-01-28 - 17:19		↪2016-01-28 - 18:37			
FED	2	G19	81	2016-01-28	
↪2016-01-27 - 19:08		↪2016-01-28 - 18:37			
FED	2	G20	128	2016-01-28	
↪2016-01-28 - 17:21		↪2016-01-28 - 18:37			
FED	2	H10	52	2016-01-28	
↪2016-01-28 - 17:21		↪2016-01-28 - 18:37			
FED	2	H15	133	2016-01-28	
↪2016-01-28 - 17:23		↪2016-01-28 - 18:39			
FED	2	H3	41	2016-01-28	
↪2016-01-28 - 17:23		↪2016-01-28 - 18:39			
FED	2	H6	63	2016-01-28	
↪2016-01-28 - 18:41		↪2016-01-28 - 19:09			
FED	2	H8	1135	2016-01-28	
↪2016-01-28 - 18:42		↪2016-01-28 - 18:42			
FED	2	PRATES	2	2016-01-28	
↪2016-01-28 - 18:42		↪2016-01-28 - 18:42			
FED	2	SLOOS	297	2016-01-28	
↪2016-01-28 - 18:42		↪2016-01-28 - 18:42			
FED	2	Z1	30267	2016-01-28	
↪2016-01-27 - 19:31		↪2016-01-28 - 18:51			
ESRI	2	kdef-cy	22	2015-12-04	
↪2016-01-27 - 19:41		↪2016-01-27 - 19:41			
ESRI	2	kdef-fy	22	2015-12-04	
↪2016-01-27 - 19:40		↪2016-01-27 - 19:40			

```

ESRI      |    2 | kdef-q      |          22 | 2015-12-04 | 𐀀
↪2016-01-27 - 19:41 | 2016-01-27 - 19:41
ESRI      |    2 | kkiyo-jcy   |          22 | 2015-12-04 | 𐀀
↪2016-01-27 - 19:40 | 2016-01-27 - 19:40
ESRI      |    2 | kkiyo-jfy   |          22 | 2015-12-04 | 𐀀
↪2016-01-27 - 19:41 | 2016-01-27 - 19:41
BIS       |    3 | CBS         |       87797 | 2016-01-19 | 𐀀
↪2016-01-27 - 19:59 | 2016-01-27 - 19:59
BIS       |    3 | CNFS        |         958 | 2015-12-01 | 𐀀
↪2016-01-27 - 20:00 | 2016-01-27 - 20:00
BIS       |    3 | DSRP        |          66 | 2015-12-01 | 𐀀
↪2016-01-27 - 20:00 | 2016-01-27 - 20:00
-----
↪-----

```

## fetchers run

```

$ dlstats fetchers run --help

Usage: dlstats fetchers run [OPTIONS]

    Run Fetcher - All datasets or selected dataset

Options:
  -v, --verbose           Enables verbose mode.
  -S, --silent            Suppress confirm
  -D, --debug
  -l, --log-level [DEBUG|WARN|ERROR|INFO|CRITICAL]
                        Logging level [default: ERROR]
  --log-config PATH       Logging config filepath
  --log-file PATH         log file for output
  --mongo-url TEXT        URL for MongoDB connection. [default:
                        mongodb://localhost/widukind]
  --data-tree             Update data-tree before run.
  -f, --fetcher [INSEE|IMF|BIS|ESRI|ECB|EUROSTAT|FED]
                        Fetcher choice [required]
  -d, --dataset TEXT      Run selected dataset only
  --help                  Show this message and exit.

```

## Example

Load or update DSRP dataset for BIS:

```
$ dlstats fetchers run -f BIS -d DSRP
```

## fetchers search

```

$ dlstats fetchers search --help

Usage: dlstats fetchers search [OPTIONS]

    Search in Series

Options:
  -v, --verbose           Enables verbose mode.

```

```
-S, --silent                Suppress confirm
-D, --debug
-l, --log-level [DEBUG|WARN|ERROR|INFO|CRITICAL]
                                Logging level [default: ERROR]
--log-config PATH           Logging config filepath
--mongo-url TEXT            URL for MongoDB connection. [default:
                                mongodb://localhost/widukind]
-t, --search-type [datasets|series]
                                Search Type [default: datasets]
-f, --fetcher [IMF|INSEE|ECB|FED|BIS|EUROSTAT|ESRI]
                                Fetcher choice
-d, --dataset TEXT          Run selected dataset only
-F, --frequency [W|M|Q|H|D|A] Frequency choice
-s, --search TEXT           Search text [required]
-l, --limit INTEGER         Result limit [default: 20]
--help                      Show this message and exit.
```

## fetchers tags

```
$ dlstats fetchers tags --help

Usage: dlstats fetchers tags [OPTIONS]

    Create or Update field tags

Options:
  -v, --verbose                Enables verbose mode.
  -S, --silent                Suppress confirm
  -D, --debug
  -l, --log-level [DEBUG|WARN|ERROR|INFO|CRITICAL]
                                Logging level [default: ERROR]
--log-config PATH           Logging config filepath
--mongo-url TEXT            URL for MongoDB connection. [default:
                                mongodb://localhost/widukind]
-f, --fetcher [FED|EUROSTAT|BIS|ESRI|IMF|INSEE|ECB]
                                Fetcher choice [required]
-d, --dataset TEXT          Run selected dataset only
-M, --max-bulk INTEGER       Max Bulk [default: 20]
-c, --collection [datasets|series|ALL]
                                Collection [default: ALL; required]
-g, --aggregate              Run aggregate tags after update.
--help                      Show this message and exit.
```

## dlstats mongo

```
$ dlstats mongo --help

Usage: dlstats mongo [OPTIONS] COMMAND [ARGS]...

    MongoDB commands.

Options:
  --help  Show this message and exit.
```

```

Commands:
  check           Verify connection
  check-schemas  Check datas in DB with schemas
  clean           Delete MongoDB collections
  reindex         Reindex collections

```

## mongo check

```

$ dlstats mongo check --help

Usage: dlstats mongo check [OPTIONS]

  Verify connection

Options:
  -v, --verbose      Enables verbose mode.
  --pretty           Pretty display.
  --mongo-url TEXT   URL for MongoDB connection. [default:
                    mongodb://127.0.0.1:27017/widukind]
  --help            Show this message and exit.

```

### Example:

```
$ dlstats mongo check
```

```

-----
Connection OK
-----
pymongo version : 3.1
----- Server Infos -----
{'allocator': 'system',
 'bits': 64,
 'compilerFlags': '/TP /nologo /EHsc /W3 /wd4355 /wd4800 /wd4267 /wd4244 /Z7 '
                  '/errorReport:none /O2 /Oy- /MT /GL',
 'debug': False,
 'gitVersion': '05bebf9ab15511a71bfbded684bb226014c0a553',
 'javascriptEngine': 'V8',
 'loaderFlags': '/nologo /LTCG /DEBUG /LARGEADDRESSAWARE '
                '/NODEFAULTLIB:MSVCPRT',
 'maxBsonObjectSize': 16777216,
 'ok': 1.0,
 'sysInfo': 'windows sys.getwindowsversion(major=6, minor=1, build=7601, '
           '"platform=2, service_pack='Service Pack 1') "
           'BOOST_LIB_VERSION=1_49',
 'version': '2.4.14',
 'versionArray': [2, 4, 14, 0]}
----- Host Infos -----
{'extra': {'pageSize': 4096},
 'ok': 1.0,
 'os': {'name': 'Microsoft Windows 7',
        'type': 'Windows',
        'version': '6.1 SP1 (build 7601)'},
 'system': {'cpuAddrSize': 64,
            'cpuArch': 'x86_64',
            'currentTime': datetime.datetime(2015, 11, 5, 7, 9, 6, 766000),
            'hostname': 'admin-VAIO',

```

```
'memSizeMB': 6125,  
'numCores': 4,  
'numaEnabled': False}}
```

-----

## mongo check-schemas

```
$ dlstats mongo check-schemas --help  
  
Usage: dlstats mongo check-schemas [OPTIONS]  
  
    Check datas in DB with schemas  
  
Options:  
  -v, --verbose          Enables verbose mode.  
  -S, --silent            Suppress confirm  
  -D, --debug  
  --mongo-url TEXT       URL for MongoDB connection. [default:  
                           mongodb://127.0.0.1:27017/widukind]  
  -M, --max-errors INTEGER [default: 0]  
  --help                  Show this message and exit.
```

### Example:

```
dlstats mongo check-schemas --max-errors 5 --silent
```

```
Attention, opération très longue  
check series...  
Max error attempt. Skip test !  
check categories...  
Max error attempt. Skip test !  
check datasets...  
Max error attempt. Skip test !  
check providers...  
-----  
Collection      | Count      | Verified   | Errors      | Time  
series           |      315032 |        9826 |           5 | 10.488  
categories       |       6875 |        1200 |           5 | 0.335  
datasets         |         23 |          9 |           5 | 0.012  
providers        |          5 |          5 |           0 | 0.001  
-----  
time elapsed : 10.841 seconds
```

## mongo clean

**Warning:** Dangerous operation !

```
$ dlstats mongo clean --help  
  
Usage: dlstats mongo clean [OPTIONS]  
  
    Delete MongoDB collections
```



```
Options:
-v, --verbose      Enables verbose mode.
-S, --silent       Suppress confirm
-D, --debug
--mongo-url TEXT  URL for MongoDB connection. [default:
                  mongodb://127.0.0.1:27017/widukind]
--help            Show this message and exit.
```

## mongo reindex

**Warning:** All Writes operations is blocked pending run !

```
$ dlstats mongo reindex --help

Usage: dlstats mongo reindex [OPTIONS]

  Reindex collections

Options:
-v, --verbose      Enables verbose mode.
-S, --silent       Suppress confirm
-D, --debug
--mongo-url TEXT  URL for MongoDB connection. [default:
                  mongodb://127.0.0.1:27017/widukind]
--help            Show this message and exit.
```

## dlstats export

```
$ dlstats export --help

Usage: dlstats export [OPTIONS] COMMAND [ARGS]...

  Export File commands.

Options:
  --help  Show this message and exit.

Commands:
  csvfile  Download csvfile from one dataset.
```

### export csvfile

```
$ dlstats export csvfile --help

Usage: dlstats export csvfile [OPTIONS]

  Download csvfile from one dataset.

Examples:
```

```
dlstats export csvfile -S -p BIS -d DSRP --create
```

```
widukind-dataset-bis-dsrp.csv not exist. creating...
```

```
export to widukind-dataset-bis-dsrp.csv - created[2016-01-30-05:09:57]
```

**Options:**

<code>-v, --verbose</code>	Enables verbose mode.
<code>-S, --silent</code>	Suppress confirm
<code>-D, --debug</code>	
<code>-l, --log-level [DEBUG WARN ERROR INFO CRITICAL]</code>	Logging level [default: ERROR]
<code>--log-config PATH</code>	Logging config filepath
<code>--mongo-url TEXT</code>	URL for MongoDB connection. [default: mongodb://localhost/widukind]
<code>-p, --provider [ECB IMF INSEE EUROSTAT FED ESRI BIS]</code>	Provider Name [required]
<code>-d, --dataset TEXT</code>	Run selected dataset only [required]
<code>-P, --filepath PATH</code>	Export filepath
<code>--create</code>	Create csv file if not exist.
<code>--help</code>	Show this message and exit.

## Configuration

### Medium

The configuration of dlstats is achieved through editing of an INI file named dlstats. For example, on a UNIX platform, the user-specific configuration would be found in \$HOME/.dlstats and the system configuration is in /etc. If the user executing dlstats has a personal configuration file, the system-wide configuration is simply ignored.

### Structure

The INI file is divided in sections, enclosed in square brackets.

### MongoDB

Those options are passed to the MongoClient instance used by dlstats and follow the pymongo API. Please refer to the pymongo documentation[1]\_ for more information.

## Database

### Specification

dlstats stores information from various statistical providers. The main goal is to keep up-to-date time series that are useful to the economist as well as their historical revisions.

### Structure

The database structure is described in bson[1]\_.

## Journal

On top of MongoDB internal journaling mechanics, we keep a reference of all operations impacting the database. The method field stores the name of the method from dlstats.

```
journal : {
  _id : MongoDB,
  method : str,
  arguments : []
}
```

## Categories

### Generic schema

Time series are organized in a tree of categories. Each node stores a reference to the node's children. It provides a simple and efficient solution to tree storage[2].

```
categories : {
  _id : MongoDB,
  _id_journal : MongoDB,
  name : str,
  children_id : [MongoID],
  series_id : [MongoID]
}
```

## Metadata

The metadata differs across statistical providers. We add the corresponding fields when needed.

### Eurostat

For eurostat, we add a number of URLs for accessing the raw tsv, dft or sdmx files. Also, there is a field for the flowRef identifying the dataflow[3]. We name codes the nomenclature of attributes that defines atomically the time series. Those codes are only provided for exploration of the database. In the program, a time series is of course identified by its unique id. A document from the codes collection contains all the series related to this code. Consequently, it is possible to query for time series using a set of constraint on codes; at the application level, the client would differentiate all the series\_id sets to only get the relevant time series. We keep a pointer to the time series for better performances.

```
categories : {
  _id : MongoDB,
  _id_journal : [MongoID],
  name : str,
  children_id : MongoDB,
  url_tsv : str,
  url_dft : str,
  url_sdmx : str,
  flowRef : str,
  codes : {
    _id_journal : MongoDB,
    name : str,

```

```
        values : {
            key : str,
            description : str,
            series_id : [MongoID]
        }
    }
```

## Time series

The values are in a list. The position field in the revisions subcollection relates to the index of that list.

```
series : {
    _id : MongoDB,
    _id_journal : MongoDB,
    name : str,
    start_date : timestamp,
    end_date : timestamp,
    release_dates : [timestamp],
    values : [float64],
    frequency : str,
    revisions : {
        value : float64,
        position : int,
        release_date : timestamp
    },
    codes : {
        name : str,
        value : str
    },
    categories_id : MongoDB
}
```

## Implementation

### MongoDB

#### Pros

- simple (from a developer perspective)
- large number of drivers
- no ORM headache
- painless sharding
- very large user base
- decent documentation

#### Cons

- immature (mongodb 1.x was scary, 2.x is stable)

- complex configuration, lot of fine-tuning required
- slow map/reduce

### Impact on the structure

Growing documents impact performance and should be avoided. Preallocation can alleviate the issue. Alternatively, setting the padding to a higher value may help but comes with a memory cost.

Large number of keys are bad because MongoDB isn't Python. Collections aren't indexed with hash tables; if the collection has a large number of keys, mongoDB has to do a large number of comparisons to execute a query. In case of reading performance issues, normalization should improve the results.

### HDF5

Better than all the other solutions as long as everything is loaded in RAM. Unfit for our job,

### Cassandra

#### Pros

- supported by the Apache Software Foundation
- excellent write performances

## MongoDB Schemas

### Table of Contents

- *MongoDB Schemas*
  - *categories*
    - \* *Fields*
    - \* *Examples*
  - *providers*
    - \* *Fields*
    - \* *Examples*
  - *datasets*
    - \* *Fields*
    - \* *Examples*
  - *series*
    - \* *Fields*
    - \* *Example - IMF*
    - \* *Example - WorldBank (GEM)*

## categories

### Fields

#### Unique Constraint

**Fields** provider + categoryCode

#### id

**required** Yes

**unique** Yes

**type** ObjectID

**comments** Unique ID

#### name

**required** Yes ???

**unique** No ???

**type** String

**default value** null ???

**comments** ???

- **Examples:**

- Catches by fishing area - historical data (1950-1999)
- Soil erosion by water by NUTS 3 regions (data source: JRC)
- Enterprises in high-tech sectors by NACE Rev.2 activity
- Enterprises in high-tech sectors by NACE Rev.1.1 activity
- Business statistics
- High-technology trade
- Data on employment at national level

#### categoryCode

**required** Yes ???

**unique** No

**type** String

**default value** null ???

**comments** ???

- **Examples:**

- fish\_ca\_h

- aei\_pr\_soiler
- htec\_eco\_ent2
- htec\_eco\_ent
- htec\_sti\_pat
- ipr\_dfa\_cres

## provider

**required** Yes

**unique** No

**type** String

**comments** Name of Provider

• **Examples:**

- WorldBank
- Eurostat
- INSEE
- IMF

## children

**required** No

**unique** No

**type** Array of bson.objectid.ObjectId or null

**default value** [None]

**comments** ???

## docHref

**required** No

**unique** No

**type** String

**default value** null

**comments** Not used

## lastUpdate

**required** No

**unique** No

**type** ISODate / datetime

**default value** null

**comments** ???

## exposed

**required** No ???

**unique** No

**type** Bool

**default value** false

**comments** ???

## Examples

```
{
  "_id": ObjectId('559d6f819f8f0807a98ee821'),
  "provider": "WorldBank",
  "docHref": null,
  "lastUpdate": null,
  "children": null,
  "categoryCode": "GEM",
  "exposed": false,
  "name": "GEM"
},
{
  "_id": ObjectId('559e40c29f8f081123ecd8f8'),
  "docHref": null,
  "categoryCode": "WEO",
  "provider": "IMF",
  "exposed": false,
  "name": "WEO",
  "lastUpdate": null,
  "children": null
},
{
  "_id": ObjectId('559d6fc69f8f0807a98f0c2f'),
  "lastUpdate": null,
  "categoryCode": "ei_bcs_cs",
  "exposed": false,
  "children": [
    ObjectId('560287d79f8f0857111ce31d'),
    ObjectId('560287d79f8f0857111ce31e')
  ],
  "provider": "Eurostat",
  "docHref": null,
  "name": "Consumer surveys (source: DG ECFIN)"
}
```

## providers

### Fields



## Unique Constraint

**Fields** name

### id

**required** Yes

**unique** Yes

**type** ObjectId

**comments** Unique ID

### name

**required** Yes

**unique** Yes

**type** String

**comments** Name of Provider

- **Examples:**

- WorldBank
- Eurostat
- INSEE
- IMF

### website

**required** Yes ???

**unique** No

**type** String

**comments** URL of Provider Site

## Examples

```
{
  "_id": ObjectId('559d6f81bc00a4d38e44ed74'),
  "website": "http://www.worldbank.org/",
  "name": "WorldBank"
},
{
  "_id": ObjectId('559d6fc6bc00a4d38e44ed76'),
  "website": "http://ec.europa.eu/eurostat",
  "name": "Eurostat"
}
```

## datasets

### Fields

#### Unique Constraint

**Fields** provider + datasetCode

#### id

**required** Yes

**unique** Yes

**type** ObjectID

**comments** Unique ID

#### provider

**required** Yes

**unique** No

**type** String

**comments** Name of Provider

- **Examples:**

- WorldBank
- Eurostat
- INSEE
- IMF

#### datasetCode

**required** Yes ???

**unique** No ???

**type** String

**comments** ???

- **Examples:**

- demo\_pjanbroad
- GEM
- 158
- 1427
- 1430
- WEO

- namq\_gdp\_c
- namq\_gdp\_k
- namq\_gdp\_p
- nama\_gdp\_c
- nama\_gdp\_k
- nama\_gdp\_p
- namq\_10\_a10
- namq\_10\_an6
- lfsi\_act\_q
- gov\_10a\_taxag
- gov\_10q\_ggdebt
- gov\_10q\_ggnfa
- namq\_10\_a10\_e
- irt\_st\_q
- namq\_10\_gdp

## name

**required** Yes ???

**unique** Yes ???

**type** String

**default value** null ???

**comments** ???

• **Examples:**

- Population on 1 January by broad age group and sex
- Global Economic Monitor
- Harmonised consumer price index - Base 2005 - French series by product according to the European classification
- Producer price indices of French industry for all markets (base 2010) - Main aggregates
- Producer price indices of French industry for the French market (base 2010) - Basic price - Main aggregates
- World Economic Outlook
- GDP and main components - Current prices
- GDP and main components - volumes
- GDP and main components - Price indices
- Gross value added and income A\*10 industry breakdowns
- Gross fixed capital formation with AN\_F6 asset breakdowns

- Population, activity and inactivity - quarterly data
- Main national accounts tax aggregates
- Quarterly government debt
- Quarterly non-financial accounts for general government
- Employment A\*10 industry breakdowns
- Money market interest rates - quarterly data
- GDP and main components (output, expenditure and income)

## lastUpdate

**required** No ???

**unique** No

**type** ISODate / datetime

**default value** null

**comments** ???

## docHref

**required** No

**unique** No ???

**type** String

**default value** null

**comments** URL for Dataset ???

- **Examples:**

- null
- <http://data.worldbank.org/data-catalog/global-economic-monitor>
- <http://www.bdm.insee.fr/bdm2/documentationGroupe?codeGroupe=158>
- <http://www.bdm.insee.fr/bdm2/documentationGroupe?codeGroupe=1427>
- <http://www.bdm.insee.fr/bdm2/documentationGroupe?codeGroupe=1430>
- <http://www.imf.org/external/ns/cs.aspx?id=28>

## dimensionList

**required** Yes

**unique** No

**type** dlstats.fetchers.\_commons.CodeDict (list of OrderedDict)

**default value** CodeDict()

**comments** ???

## attributeList

**required** No  
**unique** No  
**type** dlstats.fetchers.\_commons.CodeDict (list of OrderedDict)  
**default value** CodeDict()  
**comments** ???

## notes

**required** No  
**unique** No  
**type** String  
**default value** empty string  
**comments** ???

## Examples

```
{
  "_id": ObjectId('56016d84fab819e7b143892a'),
  "dimensionList": {
    "geo": [
      [
        "EU28",
        "European Union (28 countries)"
      ],
      [
        "EU27",
        "European Union (27 countries)"
      ],
      [
        "EA19",
        "Euro area (19 countries)"
      ],
      [
        "EA18",
        "Euro area (18 countries)"
      ],
      [
        "BE",
        "Belgium"
      ],
      [
        "BG",
        "Bulgaria"
      ],
      [
        "CZ",
        "Czech Republic"
      ],
    ]
  }
}
```

```
[
  "DK",
  "Denmark"
],
[
  "DE",
  "Germany (until 1990 former territory of the FRG)"
],
[
  "DE_TOT",
  "Germany (including former GDR)"
],
[
  "EE",
  "Estonia"
],
[
  "IE",
  "Ireland"
],
[
  "EL",
  "Greece"
],
[
  "ES",
  "Spain"
],
[
  "FR",
  "France"
],
[
  "FX",
  "France (metropolitan)"
],
[
  "HR",
  "Croatia"
],
[
  "IT",
  "Italy"
],
[
  "CY",
  "Cyprus"
],
[
  "LV",
  "Latvia"
],
[
  "LT",
  "Lithuania"
],
[
  "LU",
```

```

    "Luxembourg"
  ],
  [
    "HU",
    "Hungary"
  ],
  [
    "MT",
    "Malta"
  ],
  [
    "NL",
    "Netherlands"
  ],
  [
    "AT",
    "Austria"
  ],
  [
    "PL",
    "Poland"
  ],
  [
    "PT",
    "Portugal"
  ],
  [
    "RO",
    "Romania"
  ],
  [
    "SI",
    "Slovenia"
  ],
  [
    "SK",
    "Slovakia"
  ],
  [
    "FI",
    "Finland"
  ],
  [
    "SE",
    "Sweden"
  ],
  [
    "UK",
    "United Kingdom"
  ],
  [
    "EEA31",
    "European Economic Area (EU-28 plus IS, LI, NO)"
  ],
  [
    "EEA30",
    "European Economic Area (EU-27 plus IS, LI, NO)"
  ],
],

```

```
[
  "EFTA",
  "European Free Trade Association"
],
[
  "IS",
  "Iceland"
],
[
  "LI",
  "Liechtenstein"
],
[
  "NO",
  "Norway"
],
[
  "CH",
  "Switzerland"
],
[
  "ME",
  "Montenegro"
],
[
  "MK",
  "Former Yugoslav Republic of Macedonia, the"
],
[
  "AL",
  "Albania"
],
[
  "RS",
  "Serbia"
],
[
  "TR",
  "Turkey"
],
[
  "AD",
  "Andorra"
],
[
  "BY",
  "Belarus"
],
[
  "BA",
  "Bosnia and Herzegovina"
],
[
  "XK",
  "Kosovo (under United Nations Security Council Resolution 1244/99)"
],
[
  "MD",
```



```

        "Moldova"
    ],
    [
        "MC",
        "Monaco"
    ],
    [
        "RU",
        "Russia"
    ],
    [
        "SM",
        "San Marino"
    ],
    [
        "UA",
        "Ukraine"
    ],
    [
        "AM",
        "Armenia"
    ],
    [
        "AZ",
        "Azerbaijan"
    ],
    [
        "GE",
        "Georgia"
    ]
],
"freq": [
    [
        "A",
        "Annual"
    ],
    [
        "S",
        "Half-yearly, semester"
    ],
    [
        "Q",
        "Quarterly"
    ],
    [
        "M",
        "Monthly"
    ],
    [
        "W",
        "Weekly"
    ],
    [
        "B",
        "Business week"
    ],
    [
        "D",

```

```
        "Daily"
      ],
      [
        "H",
        "Hourly"
      ],
      [
        "N",
        "Minutely"
      ]
    ],
    "age": [
      [
        "TOTAL",
        "Total"
      ],
      [
        "Y_LT15",
        "Less than 15 years"
      ],
      [
        "Y15-64",
        "From 15 to 64 years"
      ],
      [
        "Y_GE65",
        "65 years or over"
      ],
      [
        "UNK",
        "Unknown"
      ]
    ],
    "sex": [
      [
        "T",
        "Total"
      ],
      [
        "M",
        "Males"
      ],
      [
        "F",
        "Females"
      ]
    ]
  ],
  "lastUpdate": ISODate('2015-04-23T00:00:00.000Z'),
  "attributeList": {
    "obs_status": [
      [
        "b",
        "break in time series"
      ],
      [
        "c",
        "confidential"
      ]
    ]
  }
}
```

```

    ],
    [
        "d",
        "definition differs (see metadata)"
    ],
    [
        "e",
        "estimated"
    ],
    [
        "f",
        "forecast"
    ],
    [
        "i",
        "see metadata (phased out)"
    ],
    [
        "n",
        "not significant"
    ],
    [
        "p",
        "provisional"
    ],
    [
        "r",
        "revised"
    ],
    [
        "s",
        "Eurostat estimate (phased out)"
    ],
    [
        "u",
        "low reliability"
    ],
    [
        "z",
        "not applicable"
    ]
],
"time_format": [
    [
        "P1Y",
        "Annual"
    ],
    [
        "P6M",
        "Semi-annual"
    ],
    [
        "P3M",
        "Quarterly"
    ],
    [
        "P1M",
        "Monthly"
    ]
]

```

```
    ],
    [
        "P7D",
        "Weekly"
    ],
    [
        "P1D",
        "Daily"
    ],
    [
        "PT1M",
        "Minutely"
    ]
]
},
"name": "Population on 1 January by broad age group and sex",
"provider": "Eurostat",
"datasetCode": "demo_pjanbroad",
"docHref": null
}
```

## series

### Fields

#### Unique Constraint

**Fields** provider + datasetCode + key

#### id

**required** Yes

**unique** Yes

**type** ObjectID

**comments** Unique ID

#### provider

**required** Yes

**unique** No

**type** String

**comments** Name of Provider

- **Examples:**

- WorldBank
- Eurostat
- INSEE

- IMF

## key

**required** Yes

**unique** Yes

**type** String

**comments** Unique key of Serie

- **Examples:**

- Q.PYP\_MNAC.WDA.P3.IT
- Q.PYP\_MNAC.WDA.P3.LU
- Q.PYP\_MNAC.WDA.P3.LV
- Q.PYP\_MNAC.WDA.P31\_S13.IT
- Q.PYP\_MNAC.WDA.P31\_S13.LU
- Q.PYP\_MNAC.WDA.P31\_S13.LV

## name

**required** Yes

**unique** Yes

**type** String

**comments** Unique name of Serie

## attributes

**required** No

**unique** No

**type** Dict

**comments** ???

## datasetCode

**required** Yes ???

**unique** No ???

**type** String

**comments** ???

- **Examples:**

- GEM
- nama\_gdp\_c

- namq\_gdp\_c
- 158
- 1427
- 1430
- WEO
- namq\_gdp\_k
- namq\_gdp\_p
- nama\_gdp\_k
- nama\_gdp\_p
- demo\_pjanbroad
- namq\_10\_a10
- gov\_10a\_taxag
- namq\_10\_an6
- lfsi\_act\_q
- gov\_10q\_ggdebt
- gov\_10q\_ggnfa
- namq\_10\_a10\_e
- irt\_st\_q
- namq\_10\_gdp

## dimensions

**required** Yes ???

**unique** No

**type** Dict

**comments** ???

## startDate

**required** Yes ???

**unique** No

**type** Integer ???

**comments** ???

## endDate

**required** Yes ???

**unique** No

**type** Integer ???

**comments** ???

### frequency

**required** Yes ???

**unique** No

**type** String

**comments** ???

- **Examples:**

- A

- M

- Q

### releaseDates

**required** Yes ???

**unique** No

**type** Array

**comments** ???

### revisions

**required** Yes ???

**unique** No

**type** Dict

**comments** ???

### values

**required** Yes ???

**unique** No

**type** Array

**comments** ???

### notes

**required** No ???

**unique** No

```
type String
comments ???
```

### Example - IMF

```
{
  "_id": ObjectId('560154fe9f8f084db8e653a3'),
  "attributes": {
    "flag": [
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      "",
      ""],
    ],
  },
  "datasetCode": "WEO",
  "dimensions": {
    "Scale": "Billions",
    "WEQ Country Code": "512",
    "Country": "AFG",
```





[illegible]

```

        "n/a",
        "n/a",
        "n/a",
        "n/a",
        "n/a",
        "n/a",
        "n/a",
        "181.605",
        "220.013",
        "246.210",
        "304.926",
        "345.817",
        "427.495",
        "517.509",
        "607.227",
        "711.759",
        "836.222",
        "1,033.591",
        "1,114.649",
        "1,165.605",
        "1,250.023",
        "1,382.709",
        "1,535.283",
        "1,699.171",
        "1,884.765",
        "2,081.098"
    ]
}

```

### Example - WorldBank (GEM)

```

{
  "_id": ObjectId('55f927739f8f087fa959e3ed'),
  "values": [
    "",
    "0.736533",
    "0.68195",
    "0.714125",
    "0.666342",
    "0.840883",
    "0.881617",
    "1.02235",
    "1.041133",
    "1.085208",
    "1.222867",
    "1.304292",
    "1.345858",
    "1.480267",
    "2.010875",
    "1.582225",
    "1.327092",
    "1.581",
    "1.506467",
    "2.138275",
    "2.884017",
    "2.759967",
  ]
}

```





```
  ],
  "dimensions": {
    "Commodity": "4"
  },
  "name": "Commodity Prices; Meat, beef, $/kg, nominal$; Annual",
  "frequency": "A",
  "attributes": {},
  "endDate": 55,
  "provider": "WorldBank",
  "datasetCode": "GEM"
}
```

## Sources Referential

### Table of Contents

- *Sources Referential*
  - *Standards*
    - \* *IN-PROGRESS SDMX*
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    - \* *IN-PROGRESS Australian Bureau of Statistics*
    - \* *Bank of International Settlements*
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- \* *IN-PROGRESS Monaco*
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- \* *IN-PROGRESS Netherlands*
- \* *OECD*
- \* *IN-PROGRESS Portugal*
- \* *IN-PROGRESS Russia*
- \* *IN-PROGRESS Sweden*
- \* *IN-PROGRESS South Korea*
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- \* *IN-PROGRESS United Nations*
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- \* *World Bank*
- *Related projects*
  - \* *IN-PROGRESS Links*
  - \* *TODO standard*

## Standards

### IN-PROGRESS SDMX

- Standards for the exchange of statistical information
- Raw data : SDMX-ML(XML),SDMX-EDI(EDIFACT)
- DSD: Data Structure Definition, logical container for specific data with specific format
- Dimension/attribute, identifier, attachement level, code list
- Concept scheme : Dimension(time,country,frequency,topic), Attributes(observation status:estimated or provisional), Measures(observation values)
- SDMX Compact, Query
- Cross domain concept
- Provision agreement: describes the way of delivering data in specific DSD at certain period
- SDMX registry: central online repository

- SDMX Technical specifications: Preparation, SDMX compliance with DSD standard, implementation (installed), production
- Sponsor: BIS, ECB, Eurostat, IMF, OECD, UN, World Bank
- Rest(SDMX2.1): URL with a keyfilter and a periodfilter
- <http://sdmx.org>
- [https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php/Main\\_Page](https://webgate.ec.europa.eu/fpfis/mwikis/sdmx/index.php/Main_Page)
- <http://sdmx.wikispaces.com/>
- <http://opensdmx.wikispaces.com/Presentations>
- SDMX-JSON:
- SDMX ISO: 17369

## **TODO Others**

### **TODO RDF**

- Resource Description Framework representation : metadata data model.

General method for conceptual description or modeling of information that is implemented in web resources, using a variety of syntax notations and data serialization formats.

### **TODO SAX**

- Simple API for XML (Faster and less memory than DOM)

### **TODO XLST**

- eXtensible Stylesheet Transformation of XML

### **IN-PROGRESS RSS**

- Really Simple Syndication: RSS feeds enable publishers to syndicate data automatically

## **Sources**

### **IN-PROGRESS African Development Bank**

- <http://dataportal.afdb.org> didn't work on 12/28/2013
- xls, pdf?

### **IN-PROGRESS Asian Development Bank**

- files download at <https://sdbas.adb.org/sdbas/index.jsp>. Yearly data. CSV. PDF file?
- files download at <http://aric.adb.org/macroindicators>, monthly quarterly yearly indicators. HTML or Excel files.



**IN-PROGRESS Australian Bureau of Statistics**

- <http://stat.abs.gov.au/sdmxws/sdmx.asmx>
- <http://www.abs.gov.au/ausstats/abs@.nsf/Lookup/by+Subject/1407.0.55.002~2013~Main+Features~SDMX+Web+Service+Methods~7>

**Bank of International Settlements**

- CSV, Excel, SDMX-ML, URL of favorites queries

**URLs**

- [http://www.bis.org/statistics/biswebstats\\_help.htm](http://www.bis.org/statistics/biswebstats_help.htm)

**IN-PROGRESS Belgium****IN-PROGRESS Statistics Belgium**

- Excel format, could be difficult to download
- <http://statbel.fgov.be/fr/statistiques/chiffres/population/>

**IN-PROGRESS Brazil****IN-PROGRESS Instituto Brasileiro de Geographia e Estatistica**

- XLS [http://downloads.ibge.gov.br/downloads\\_estatisticas.htm](http://downloads.ibge.gov.br/downloads_estatisticas.htm)
- XLS [http://servicodados.ibge.gov.br/Download/Download.ashx?u=ftp.ibge.gov.br/Contas\\_Nacionais/Contas\\_Nacionais\\_Trimestrais/Tabelas\\_Completas/Tab\\_Compl\\_CNT.zip](http://servicodados.ibge.gov.br/Download/Download.ashx?u=ftp.ibge.gov.br/Contas_Nacionais/Contas_Nacionais_Trimestrais/Tabelas_Completas/Tab_Compl_CNT.zip)
- <http://www.ibge.gov.br/english/default.php>
- [http://downloads.ibge.gov.br/downloads\\_estatisticas.htm](http://downloads.ibge.gov.br/downloads_estatisticas.htm)
- pdf, ods, xls

**IN-PROGRESS Canada**

- Statistique Canada
- <http://www.statcan.gc.ca/concepts/index-fra.htm?MM>

**IN-PROGRESS China****IN-PROGRESS National Bureau of Statistics of China**

- no API? Only web page?
- XLS, until 2011 : <http://www.stats.gov.cn/tjsj/ndsj/2012/html/>
- XLS, until 2012 : <http://www.stats.gov.cn/tjsj/ndsj/2013/html/>

## **IN-PROGRESS CIRCAB**

- Communication and Information Resource Centre for Administrations, Businesses and Citizens.
- <https://circabc.europa.eu/faces/jsp/extension/wai/navigation/container.jsp>
- <http://ec.europa.eu/idabc/en/document/7400.html>
- [forge.osor.eu/projects/circabc](http://forge.osor.eu/projects/circabc)

## **CME groupe**

- <http://www.cmegroup.com>
- data on future and option market
- proprietary data, can't be used on our web site

## **IN-PROGRESS ECB SDW**

- <http://sdw.ecb.europa.eu/>
- SDMX(ML/query), CSV (excel and )
- <https://www.ecb.europa.eu/stats/services/sdmx/html/tutorial.en.html>

## **IN-PROGRESS EUROSTAT**

- SDMX(REST,SOAP with ZIP),TSV, DFT(multi-dimensional table) with GZ
- Html explorator online search with New (data and DSD) and Modified online search

## **IN-PROGRESS FAO**

- SDMX registry and repo, SDMX-ML
- [data.fao.org](http://data.fao.org)

## **Germany**

### **Federal Statistical Office and the statistical Offices of the Länder**

- Csv, pdf, xls
- [http://www.statistikportal.de/Statistik-Portal/en/en\\_about.asp](http://www.statistikportal.de/Statistik-Portal/en/en_about.asp)
- <https://ergebnisse.zensus2011.de/?locale=en#StaticContent:00,,>

## **IN-PROGRESS DESTATIS**

- Federal Statistical Office of Germany
- no download or API?
- <https://www.destatis.de/EN/Homepage.html>

## Greece

### hellenic Statistical Authority(EL.STAT.)

- <http://www.statistics.gr/portal/page/portal/ESYE/PAGE-database>
- anonymous users there is an upper limit of 500 records you can extract from the Statistical Database
- XLS, CSV, TEXT
- Difficult to automatize

## IN-PROGRESS IMF

- the data in eLibrary don't seem to be free
- <http://www.imf.org/external/data.htm>
- World Economic Outlook database: (Tab Delimited Values format) <http://www.imf.org/external/pubs/ft/weo/2013/02/weodata/download.aspx>
- User Query Test Interface : <http://sdmxws.imf.org/Gateway/Home.aspx>
- IMF Balance of Payments Pilot SDMX Data Dissemination Site with DSD in XML or excel: <http://sdmx.imf.org/bop/>

## IN-PROGRESS India

### Indian Statistical System official statistics

-<http://164.100.34.62:8080/dwh/>

## IN-PROGRESS INSEE

- Banque de données macro-économiques (BDM)(server unavailable?): consult and download more than 170.000 series and index over all economics and social area

## IN-PROGRESS ISTAT

- Equivalent of INSEE: old version before 2012 Con.ISAT short term indicator time-series database :prices, industry, services, wages and salaries, employment and labour indicators, foreign trade, national accounts )
- SDMX ML, CSV, excel, beta version,open and free, online API: <http://dati.istat.it/>
- EUROSTAT SODI (SDMX Open Data Interchange) for exchanging PEEIs (Principal Economical European Indicators) :
- private logging <http://sodi.istat.it/progettosodiDW/> or <http://bms.istat.it/sodidownload/download.aspx>
- <https://joinup.ec.europa.eu/community/osor/description>
- SDMX is not working?

## **IN-PROGRESS Japan**

### **Statistics of Japan**

- API in Japanese only <http://www.stat.go.jp/english/info/news/1957.htm>

### **Bank of Japan**

- no API? Only files?

## **IN-PROGRESS Luxembourg**

### **Central Service for Statistics and Economic Studies (STATEC)**

- <http://www.statistiques.public.lu/en/index.html>

## **IN-PROGRESS Madagascar**

<http://www.instat.mg/>

## **IN-PROGRESS Monaco**

### **Monaco Statistics (IMSEE)**

- <http://www.monacostatistics.mc/Key-Figures>

## **National Bureau of Statistics of China**

- no API? Only web page?
- XLS, until 2011 : <http://www.stats.gov.cn/tjsj/ndsj/2012/html/>
- XLS, until 2012 : <http://www.stats.gov.cn/tjsj/ndsj/2013/html/>

## **IN-PROGRESS Netherlands**

### **Statistics Netherlands (CBS)**

- Statline : <http://statline.cbs.nl/StatWeb/?LA=en>

## **OECD**

### **OpenDataAPI**

- <http://stats.oecd.org/OpenDataAPI/OData.html>
- not all datasets seems to be available with this API

## SDMX-JSON API

- <http://stats.oecd.org/OpenDataAPI/Json.htm>
- SDMX-JSON API is easier and more concise than OData. Data and metadata are obtained in a single call
- The list of datasets must be obtained with OData

## Webservice

- <http://stats.oecd.org/SDMXWS/sdmx.asmx>
- <http://stats.oecd.org/SDMXQuery/Home.aspx>
- <http://sdmx.wikispaces.com/OECD+Web+Service>

## IN-PROGRESS Portugal

### Statistics Portugal (INE)

- [http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine\\_base\\_dados&contexto=bd&selTab=tab2](http://www.ine.pt/xportal/xmain?xpid=INE&xpgid=ine_base_dados&contexto=bd&selTab=tab2)

## IN-PROGRESS Russia

<http://www.gks.ru/>

## IN-PROGRESS Sweden

### Statistics Sweden

- Statistics Sweden
- PC, excel, csv, tsv

## IN-PROGRESS South Korea

### Statistics Korea

- <http://kostat.go.kr/portal/english/resources/1/index.static>

## IN-PROGRESS Spain

## IN-PROGRESS ILO

- no API, download files
- old database: laborstat, CSV, <http://laborsta.ilo.org/>
- new database: ilostat, CSV (, TAB ;) [http://www.ilo.org/ilostat/faces/home/statisticaldata/bulk-download?\\_adf.ctrl-state=hlizkfzwc\\_98&clean=true&\\_afLoop=368699868737048](http://www.ilo.org/ilostat/faces/home/statisticaldata/bulk-download?_adf.ctrl-state=hlizkfzwc_98&clean=true&_afLoop=368699868737048)
- SDMX <http://www.ilo.org/ilostat/sdmx/ws/rest/>

## **IN-PROGRESS INE**

- [http://www.ine.es/en/inebmenu/indice\\_en.htm#2](http://www.ine.es/en/inebmenu/indice_en.htm#2)
- CSV, excel, or PC-Axis program : <http://www.ine.es/ss/Satellite?c=Page&p=1254735116596&pagename=ProductosYServicios%2FPYSLayout&cid=1254735116596&L=1>

## **IN-PROGRESS Swiss**

### **IN-PROGRESS Federal Statistical Office (FSO)**

- <http://www.pxweb.bfs.admin.ch/Dialog/statfile.asp?lang=2&prod=01>
- Excel, PX, CSV

## **IN-PROGRESS United Nations**

### **IN-PROGRESS National accounts (Excel files)**

- <http://unstats.un.org/unsd/snaama/dnList.asp>. Easy to download with wget type tool <https://www.gnu.org/software/wget/>

### **Monthly Bulletin of Statistics Online (MBS)**

- API SOAP : <http://unstats.un.org/unsd/mbs/api/wsMbsServices.asmx>

## **IN-PROGRESS United Kingdom**

### **Office for National Statistics (ONS)**

- <http://www.statistics.gov.uk/hub/statistics-producers/index.html>

<http://data.gov.uk/>

<http://www.statsusernet.org.uk/home>

<http://www.statisticsauthority.gov.uk/>

## **IN-PROGRESS USA**

### **Bureau of Economic Analysis (BEA)**

- [http://www.bea.gov/iTable/index\\_nipa.cfm](http://www.bea.gov/iTable/index_nipa.cfm)

### **Bureau of Labor Statistics (BLS)**

- <http://www.bls.gov/data/>

## World Bank

### IN-PROGRESS General information on API

- <http://data.worldbank.org/node/9>
- RESTful interfaces
- Indicators (or time series data): API, XML and JSON
- Projects (or data on the World Bank's operations) : Atom representation
- the World Bank financial data (World Bank Finances API):API, XML, JSON and RDF

## Related projects

### IN-PROGRESS Links

- Haver Analytics(Matlab; STATA, SAS, EVIEWS, RATS): the provider of time series data for the global strategy and research community. Contains more than 200+ databases from over 1200 government and private sources.
- Bloomberg:
- Datastream(Pro):The industry's largest and most trusted set of macro-time series data. Containing up to 50 years of history on many series, over 3.5 million global financial instruments and indicators, more than 10,000 different fields, and more than 75,000 active (and 30,000 inactive) securities. Together they cover 175 countries in 60 global markets totaling over 140 million time series.
- Datahub <http://datahub.io> : free access to many of CKAN's core features
- Eurostat linked data: <http://eurostat.linked-statistics.org/>
- Linked dataspaces <http://270a.info> , <http://csarven.ca/linked-sdmx-data>
- OpenRefine (ex Google refine) <https://github.com/OpenRefine>, data cleaning, transforming, extending with web services
- Opendatafoundation : Adoption of global metadata standards <http://www.opendatafoundation.org>
- Quandl <http://www.quandl.com>
- Google Public Data Explorer(DSPL):visualisation no download, <https://www.google.com/publicdata/directory#>
- <http://opendatahandbook.org/fr/how-to-open-up-data/make-data-available.html>

### TODO standard

- CKAN : powerful data management system. It is used by national and local governments, research institutions, and other organisations which collect a lot of data





## CHAPTER 3

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### Indices and tables

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- `genindex`
- `modindex`
- `search`



### C

`csv_dict()` (in module `dlstats.fetchers.bis`), [4](#)

### E

`extract_zip_file()` (in module `dlstats.fetchers.bis`), [4](#)

### L

`local_read_csv()` (in module `dlstats.fetchers.bis`), [4](#)