# Package 'INEbaseR'

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**Type** Package

**Title** R package for obtaining and analyzing open data from INE
(Instituto Nacional de Estadistica) API

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**Description** R package for obtaining and analyzing open data from INE (Instituto Nacional de Estadistica) API.

**License** GPL (>= 3)

**Encoding** UTF-8

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**BuildResaveData** false

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**Depends** R (>= 3.5.0)

## R topics documented:

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get_geographical         *Get geographical*

---

## Description

This function returns geographical information

## Usage

```
get_geographical(
  code = NULL,
  resource = "variable",
  all = FALSE,
  verbose = FALSE,
  natcode = NULL,
  geocode = NULL,
  exponential_notation = FALSE,
  help = FALSE
)
```

## Arguments

| | |
|---|---|
| code | (string) serie id |
| resource | (string) resource to access, by default `resource = "variable"` to get serie metadata. Possible values are `variable`, `natcode` or `natcode_to_geocode` |
| all | (boolean) if `all = TRUE` you will get all natcodes |
| verbose | (boolean) show more information during the process |
| natcode | (int) geographical code from INE |
| geocode | (string) geographical code from Eurostat |
| exponential_notation | |
| | (boolean) to show or not exponential notation. `e.g. e+10` |
| help | (boolean) type any value for `resource` param and type `help = TRUE` to see params available for this `resource`. |

## Examples

```
get_geographical("IPC251522")
get_geographical(resource = "variable", help = TRUE)
get_geographical("IPC251522", resource = "natcode")
get_geographical(natcode = 34050000000, resource = "natcode_to_geocode")
```

---

get_metadata_crossing *Get metadata crossing*

---

### Description

This function returns data or metadata by metadata crossing

### Usage

```
get_metadata_crossing(
  code = NULL,
  resource = "series",
  help = FALSE,
  query = NULL,
  p = 1,
  det = 0,
  tip = NULL,
  nlast = 1,
  lang = "ES"
)
```

### Arguments

| | |
|---|---|
| code | (string) operation identificator |
| resource | (string) resource to access, by default resource = "metadata" to get serie meta-data. Possible values are series or data |
| help | (boolean) type any value for resource param and type help = TRUE to see params available for this resource. |
| query | (string) string separated by AND with syntax variable = value using natural language |
| p | (int) periodicity, p = 1 by default |
| det | (int) det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default |
| tip | (string) tip = M to obtain the metadata (crossing variables-values) of the series |
| nlast | last n values |
| lang | (string) language used to obtain information |

### Examples

```
get_metadata_crossing(resource = "series", help = TRUE)
get_metadata_crossing("IPC", resource = "series", query = "Provincias = Madrid AND Tipo de dato = Variacion mens
get_metadata_crossing("IPC", resource = "data", query = "Provincias = Madrid AND Tipo de dato = Variacion mensua
```

---

get_operations                 *Get operations*

---

### Description

This function returns information about operations

### Usage

```
get_operations(
  code = NULL,
  resource = "all",
  help = FALSE,
  ioe = FALSE,
  geographical_granularity = NULL,
  temporal_granularity = NULL,
  verbose = TRUE,
  lang = "ES"
)
```

### Arguments

| | |
|---|---|
| code | (string) operation identificator |
| resource | (string) resource to access, by default `resource = "metadata"` to get serie meta-data. Possible values are `all`, `metadata`, `variables_values` or `by_granularity` |
| help | (boolean) type any value for `resource` param and type `help = TRUE` to see params available for this `resource`. |
| ioe | (boolean) `TRUE` if code is in format `IO30138`, and `FALSE` by default |
| geographical_granularity | |
| | (string) geographical granularity |
| temporal_granularity | |
| | (string) temporal granularity |
| verbose | (boolean) show more information during the process |
| lang | (string) language used to obtain information |

### Examples

```
get_operations()
get_operations(resource = "all")
get_operations(resource = "all", help = TRUE)
get_operations("IPC", resource = "metadata")
get_operations("IPC", resource = "variables_values")
get_operations(resource = "by_granularity", geographical_granularity = "PROV")
```

| get_publications | *Get publications* |
|---|---|

## Description

This function returns all available publications from an operation or a date

## Usage

```
get_publications(
  code = NULL,
  resource = "all",
  help = FALSE,
  det = 0,
  ioe = FALSE,
  lang = "ES"
)
```

## Arguments

| | |
|---|---|
| code | (string) operation or publication indentificator |
| resource | (string) resource to access, by default resource = "all" to get serie metadata. Possible values are all, operation or date |
| help | (boolean) type any value for resource param and type help = TRUE to see params available for this resource. |
| det | (int) det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default |
| ioe | (boolean) TRUE if code is in format IO30138, and FALSE by default |
| lang | (string) language used to obtain information |

## Examples

```
get_publications()
get_publications(resource = "all", help = TRUE)
get_publications("IPC", resource = "operation")
get_publications(8, resource = "date")
```

| get_series | *Get series* |
|---|---|

## Description

This function returns data or metadata from an operation, table or a serie

**Usage**

```
get_series(
  code = NULL,
  resource = "metadata",
  help = FALSE,
  ioe = FALSE,
  det = 0,
  tip = NULL,
  lang = "ES",
  date_start = NULL,
  date_end = NULL,
  nlast = NULL,
  classification = NULL,
  verbose = FALSE,
  benchmark = FALSE,
  geographical_granularity = NULL,
  temporal_granularity = NULL
)
```

**Arguments**

| | |
|---|---|
| code | (string) serie, operation or table identificator |
| resource | (string) resource to access, by default `resource = "metadata"` to get serie metadata. Possible values are `metadata`, `operation`, `values`, `table`, `metadataoperation`, `data`, `by_gra` or `nlast` |
| help | (boolean) type any value for `resource` param and type `help = TRUE` to see params available for this `resource`. |
| ioe | (boolean) `TRUE` if code is in format `IO30138`, and `FALSE` by default |
| det | (int) `det = 2` to see two levels of depth, specifically to access the `PubFechaAct` object, `det = 0` by default |
| tip | (string) `tip = M` to obtain the metadata (crossing variables-values) of the series |
| lang | (string) language used to obtain information |
| date_start | (string) start date in format `YYYY-MM-DD` |
| date_end | (string) end date in format `YYYY-MM-DD` |
| nlast | (int) last n serie values |
| classification | (string) serie classification, if `classification = NULL` this value will be autodetected |
| verbose | (boolean) to show more information about this process, `verbose = FALSE` by default |
| benchmark | (boolean) used to measure the performance of the system, `benchmark = FALSE` by default. |
| geographical_granularity | |
| | (string) geographical granularity |
| temporal_granularity | |
| | (string) temporal granularity |

## Examples

```
get_series("IPC206449")
get_series(resource = "metadata", help = TRUE)
get_series("IPC", resource = "operation")
get_series("IPC206449", resource = "values")
get_series(22350, resource = "table")
get_series("IPC251541", resource = "nlast")
get_series("IPC206449", resource = "data", nlast = 5)
get_series("IPC", resource = "by_granularity", geographical_granularity = "CCAA", verbose = TRUE)
get_series("IPC251539", resource = "by_common_parameters", verbose = TRUE)
```

---

get_tables                          *Get tables*

---

## Description

This function returns data / metadata from tables

## Usage

```
get_tables(
  code = NULL,
  resource = "operation",
  help = FALSE,
  grp = NULL,
  geo = 0,
  nlast = 0,
  det = 0,
  tip = NULL,
  ioe = FALSE,
  lang = "ES"
)
```

## Arguments

| | |
|---|---|
| code | operation (string/int) or table (int) identificator |
| resource | (string) resource to access, by default `resource = "operation"` to get tables of an operation. Possible values are `operation`, `group`, `group_values` or `data` |
| help | (boolean) type any value for `resource` param and type `help = TRUE` to see params available for this `resource` |
| grp | (int) group identification |
| geo | (int) use `geo = 1` to access only tables with geographic content, `geo = 0` by default |
| nlast | last n values |
| det | (int) use `det = 2` to see two levels of depth, specifically to access the `PubFechaAct` object, `det = 0` by default |
| tip | (string) use `tip = "A"` to view as friendly, specifically the view the field `ultima_modificacion` or use `tip = "AM"` to obtain the metadata (crossing variables-values) of the series and a friendly output. |
| ioe | (boolean) use `ioe = TRUE` if code is in format `IO30138`, and `FALSE` by default |
| lang | (string) language used to obtain information |

## Examples

```
get_tables("IPC")
get_tables(resource = "operation", help = TRUE)
get_tables(25, resource = "operation")
get_tables(22350, resource = "group")
get_tables(22350, grp = 81497, resource = "group_values")
get_tables(22350, nlast = 5, resource = "data")
```

---

get_values                          *Get values*

---

## Description

This function returns values from a variable or variable operation

## Usage

```
get_values(
  code = NULL,
  resource = "all",
  operation = NULL,
  help = FALSE,
  det = 0,
  ioe = FALSE,
  lang = "ES"
)
```

## Arguments

| | |
|---|---|
| code | (int) variable indentificator |
| resource | (string) resource to access, by default `resource = "all"` to get serie metadata. Possible values are `all` or `variable_operation` |
| operation | (string) operation indentificator |
| help | (boolean) type any value for `resource` param and type `help = TRUE` to see params available for this `resource`. |
| det | (int) `det = 1` to see the detail of the variable to which it belongs, `det = 0` by default |
| ioe | (boolean) TRUE if code is in format `IO30138`, and `FALSE` by default |
| lang | (string) language used to obtain information |

## Examples

```
get_values(115)
get_values(resource = "all", help = TRUE)
get_values(762, operation = "IPC", resource = "variable_operation")
```

---

```
get_variables          Get variables
```

---

### Description

This function returns all or operations variables

### Usage

```
get_variables(
  code = NULL,
  resource = "all",
  help = FALSE,
  ioe = FALSE,
  lang = "ES"
)
```

### Arguments

| | |
|---|---|
| code | (string) operation identifier |
| resource | (string) resource to access, by default resource = "metadata" to get serie metadata. Possible values are all or operation |
| help | (boolean) type any value for resource param and type help = TRUE to see params available for this resource. |
| ioe | (boolean) TRUE if code is in format IO30138, and FALSE by default |
| lang | (string) language used to obtain information |

### Examples

```
get_variables()
get_variables(resource = "all", help = TRUE)
get_variables("IPC", resource = "operation")
```

---

```
represent_series          Represent series
```

---

### Description

This function allows representing series data in maps or charts

### Usage

```
represent_series(
  code = NULL,
  resource = "maps",
  help = FALSE,
  nlast = 0,
  date_start = NULL,
  date_end = NULL,
```

```
  classification = NULL,
  map_scale = 60,
  verbose = FALSE,
  benchmark = FALSE,
  det = 0,
  type = NA,
  lang = "ES"
)
```

## Arguments

| | |
|---|---|
| code | (string) serie identificator |
| resource | (string) resource to access, by default resource = "all" to get serie metadata. Possible values are maps,plot or highcharts |
| help | (boolean) type any value for resource param and type help = TRUE to see params available for this resource. |
| nlast | (int) last n serie data, if nult = 0 this value will be auto-calculated |
| date_start | (date) start date in format (string) YYYY-MM-DD |
| date_end | (date) end date in format (string) YYYY-MM-DD |
| classification | (string) serie classification, if classification = NULL this value will be auto-detected |
| map_scale | (int) refers to the relationship or ratio between distance on a map and the corresponding distance on the ground. For example, on a 1:1000000 scale map, 1cm on the map equals 1km on the ground. Possible values are: 1,3,10,20 or 60, and it's only for PROV or CCAA geographical granularity, map_scale = 60 by default and map_scale = NULL for high detailed map. |
| verbose | (boolean) show more information during the process |
| benchmark | (boolean) used to measure the performance of the system, benchmark = FALSE by default. |
| det | (int) det = 2 to see two levels of depth, specifically to access the PubFechaAct object, det = 0 by default |
| type | (string) what type of plot should be drawn, type = "p" (for points) by default. See type in [plot](plot) |
| lang | (string) language used to obtain information |

## Examples

```
represent_series("IPC251521", resource = "maps")
represent_series(resource = "maps", help = TRUE)
represent_series("IPC251521", resource = "maps", map_scale = NULL)
represent_series("IPC206449", resource = "plot", nlast = 5)
represent_series("IPC206449", resource = "highcharts", nlast = 5)
```

---

update_cache *Update cache*

---

## Description

This function allows to update cache data

## Usage

```
update_cache(
  code = NULL,
  resource = "series",
  help = FALSE,
  n = 0,
  page = 1,
  pagination = TRUE,
  page_start = NULL,
  page_end = NULL,
  benchmark = FALSE,
  force = FALSE,
  ignore_series = NULL,
  tip = "M",
  det = 2,
  lang = "ES"
)
```

## Arguments

| | |
|---|---|
| code | (string) operation identificator |
| resource | (string) resource to access, by default resource = "all" to get serie metadata. Possible values are all or series |
| help | (boolean) type any value for resource param and type help = TRUE to see params available for this resource. |
| n | (int) number of operation to update starting from first operation getted from get_operations_all() function. |
| page | (int) page = 1 to obtain data of an specific page (to use this, pagination = FALSE). |
| pagination | (boolean) TRUE to obtain data page by page and FALSE by default. |
| page_start | (int) page_start = 1 start page range to obtain data (to use this, pagination = TRUE). |
| page_end | (int) page_end = 2 end page range to obtain data (to use this, pagination = TRUE). |
| benchmark | (boolean) used to measure the performance of the system, benchmark = FALSE by default. |
| force | (boolean) to force to update all cache data, force = FALSE by default. |
| ignore_series | (list) list of operation identificators to ignore. More slow series to cache are: 16, 49, 330 and 334 |
| tip | (string) tip = M to obtain the metadata (crossing variables-values) of the series. |

det                    (int) det = 2 to see two levels of depth, specifically to access the PubFechaAct
                       object, det = 0 by default

lang                   (string) language used to obtain information

## Examples

```
update_cache(resource = "series")
update_cache(resource = "series", help = TRUE)
```

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