

# Package ‘restatis’

July 23, 2025

**Title** R Wrapper to Access a Wide Range of Germany's Federal Statistical System Databases Based on the GENESIS Web Service RESTful API of the German Federal Statistical Office (Statistisches Bundesamt/Destatis)

**Version** 0.3.0

**Description** A RESTful API wrapper for accessing the GENESIS database of the German Federal Statistical Office (Destatis) as well as its Census Database and the database of Germany's regional statistics. Supports data search functions, credential management, result caching, and handling remote background jobs for large datasets.

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**URL** <https://correlaid.github.io/restatis/>,  
<https://github.com/CorrelAid/restatis>

**BugReports** <https://github.com/CorrelAid/restatis/issues>

**Depends** R (>= 2.10)

**Imports** askpass, httr2, memoise, readr, stats, tibble, vctrs, purrr

**Suggests** httptest2, knitr, rmarkdown, testthat (>= 3.0.0), rvest, usethis, withr

**VignetteBuilder** knitr

**Config/testthat/edition** 3

**Encoding** UTF-8

**LazyData** true

**RoxygenNote** 7.3.2

**NeedsCompilation** no

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**Date/Publication** 2025-04-09 20:00:02 UTC

## Contents

|                                       |    |
|---------------------------------------|----|
| .gen_api_core . . . . .               | 3  |
| binding_lapply . . . . .              | 4  |
| check_function_input . . . . .        | 4  |
| check_results . . . . .               | 5  |
| evas_list . . . . .                   | 6  |
| find_token . . . . .                  | 6  |
| forming_evas . . . . .                | 7  |
| gen_alternative_terms . . . . .       | 7  |
| gen_auth_ask . . . . .                | 8  |
| gen_auth_get . . . . .                | 9  |
| gen_auth_path . . . . .               | 9  |
| gen_auth_save . . . . .               | 10 |
| gen_catalogue . . . . .               | 11 |
| gen_cube . . . . .                    | 12 |
| gen_download_job . . . . .            | 14 |
| gen_find . . . . .                    | 15 |
| gen_list_jobs . . . . .               | 16 |
| gen_logincheck . . . . .              | 18 |
| gen_metadata . . . . .                | 18 |
| gen_metadata_cube . . . . .           | 20 |
| gen_metadata_statistic . . . . .      | 21 |
| gen_metadata_table . . . . .          | 22 |
| gen_metadata_value . . . . .          | 23 |
| gen_metadata_variable . . . . .       | 24 |
| gen_modified_data . . . . .           | 26 |
| gen_objects2stat . . . . .            | 27 |
| gen_objects2var . . . . .             | 29 |
| gen_search_vars . . . . .             | 30 |
| gen_signs . . . . .                   | 31 |
| gen_table . . . . .                   | 32 |
| gen_update_evas . . . . .             | 34 |
| gen_val2var . . . . .                 | 34 |
| gen_val2var2stat . . . . .            | 35 |
| gen_var2stat . . . . .                | 37 |
| ggsub . . . . .                       | 38 |
| insert_and_save_credentials . . . . . | 39 |
| is_cube_metadata_header . . . . .     | 39 |
| logincheck_http_error . . . . .       | 40 |
| logincheck_stop_or_warn . . . . .     | 40 |
| param_check_regionalkey . . . . .     | 41 |
| param_check_year . . . . .            | 41 |
| param_collapse_vec . . . . .          | 41 |

|                                                  |    |
|--------------------------------------------------|----|
| <code>read_cube</code> . . . . .                 | 42 |
| <code>read_cube_block</code> . . . . .           | 42 |
| <code>read_cube_data_lines</code> . . . . .      | 42 |
| <code>read_cube_metadata_header</code> . . . . . | 43 |
| <code>rename_cube_data_columns</code> . . . . .  | 43 |
| <code>resp_check_data</code> . . . . .           | 43 |
| <code>return_table_object</code> . . . . .       | 44 |
| <code>set_credentials_auth</code> . . . . .      | 44 |
| <code>spezifisch_create</code> . . . . .         | 45 |
| <code>split_cube</code> . . . . .                | 45 |
| <code>test_database_function</code> . . . . .    | 45 |
| <code>test_if_error</code> . . . . .             | 46 |
| <code>test_if_error_find</code> . . . . .        | 46 |
| <code>test_if_error_light</code> . . . . .       | 47 |
| <code>test_if_error_variables</code> . . . . .   | 47 |
| <code>test_if_json</code> . . . . .              | 47 |
| <code>test_if_okay</code> . . . . .              | 48 |
| <code>test_if_process_further</code> . . . . .   | 48 |
| <code>titel_search</code> . . . . .              | 49 |

**Index****50**

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|                            |                                   |
|----------------------------|-----------------------------------|
| <code>.gen_api_core</code> | <i>Basic API request function</i> |
|----------------------------|-----------------------------------|

---

**Description**

(Uncached) Low-level function to interact with the one of the APIs

**Usage**

```
.gen_api_core(endpoint, database, ...)
```

**Arguments**

|                       |                                                                  |
|-----------------------|------------------------------------------------------------------|
| <code>endpoint</code> | Character string. The endpoint of the API that is to be queried. |
| <code>database</code> | The database the query should be sent to.                        |
| <code>...</code>      | Further parameters passed on to the final API call.              |

---

|                |                       |
|----------------|-----------------------|
| binding_lapply | <i>binding_lapply</i> |
|----------------|-----------------------|

---

**Description**

binding\_lapply

**Usage**

binding\_lapply(x, characteristics)

**Arguments**

x                   Element to bind  
characteristics      Characteristics to filter for

---

|                      |                             |
|----------------------|-----------------------------|
| check_function_input | <i>check_function_input</i> |
|----------------------|-----------------------------|

---

**Description**

check\_function\_input

**Usage**

```
check_function_input(  
  code = NULL,  
  term = NULL,  
  sortcriterion = NULL,  
  category = NULL,  
  detailed = NULL,  
  type = NULL,  
  date = NULL,  
  similarity = NULL,  
  error.ignore = NULL,  
  ordering = NULL,  
  pagelength = NULL,  
  database = NULL,  
  area = NULL,  
  caller = NULL,  
  verbose = NULL,  
  raw = NULL  
)
```

**Arguments**

|               |                         |
|---------------|-------------------------|
| code          | Parameter to be checked |
| term          | Parameter to be checked |
| sortcriterion | Parameter to be checked |
| category      | Parameter to be checked |
| detailed      | Parameter to be checked |
| type          | Parameter to be checked |
| date          | Parameter to be checked |
| similarity    | Parameter to be checked |
| error.ignore  | Parameter to be checked |
| ordering      | Parameter to be checked |
| pagelength    | Parameter to be checked |
| database      | Parameter to be checked |
| area          | Parameter to be checked |
| caller        | Parameter to be checked |
| verbose       | Parameter to be checked |
| raw           | Parameter to be checked |

---

|               |                      |
|---------------|----------------------|
| check_results | <i>check_results</i> |
|---------------|----------------------|

---

**Description**

check\_results

**Usage**

check\_results(input)

**Arguments**

|       |                                |
|-------|--------------------------------|
| input | Input to test result structure |
|-------|--------------------------------|

---

|           |                           |
|-----------|---------------------------|
| evas_list | <i>List of EVAS Codes</i> |
|-----------|---------------------------|

---

**Description**

List of EVAS Codes

**Usage**

evas\_list

**Format**

evas\_list:

A data frame with 1132 rows and 3 columns:

**EVAS** EVAS code

**Beschreibung** Details on the EVAS code

**Titel** Alternative description of EVAS code contents

**Source**

<https://www.destatis.de/DE/Methoden/Revisionen/Glossar/EVAS.html>

---

|            |                   |
|------------|-------------------|
| find_token | <i>find_token</i> |
|------------|-------------------|

---

**Description**

find\_token

**Usage**

find\_token(input, error.input, text, sub\_category)

**Arguments**

|              |                                |
|--------------|--------------------------------|
| input        | Input to test result structure |
| error.input  | error.ignore TRUE or FALSE     |
| text         | verbose TRUE or FALSE          |
| sub_category | sub_category character string  |

---

|              |                     |
|--------------|---------------------|
| forming_evas | <i>forming_evas</i> |
|--------------|---------------------|

---

**Description**

forming\_evas

**Usage**

```
forming_evas(list_of)
```

**Arguments**

|         |                              |
|---------|------------------------------|
| list_of | List of EVAS to iterate over |
|---------|------------------------------|

---

|                       |                                  |
|-----------------------|----------------------------------|
| gen_alternative_terms | <i>Find similar search terms</i> |
|-----------------------|----------------------------------|

---

**Description**

Function to find search terms that are similar or related to one another in spelling and also represented in the GENESIS, Zensus 2022 or regionalstatistik.de databases. Important note: The API call is searching for terms with the same characters. To be useful in searching for related terms it is highly recommended to work with "\*" placeholders (see examples). The placeholder can be placed before and/or after the search term.

**Usage**

```
gen_alternative_terms(  
  term = NULL,  
  similarity = TRUE,  
  database = c("all", "genesis", "zensus", "regio"),  
  pagelength = 500,  
  verbose = TRUE,  
  ...  
)
```

**Arguments**

|            |                                                                                                                                                                                                         |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| term       | Character string. Maximum length of 15 characters. Term or word for which you are searching for alternative or related terms. Use of '*' as a placeholder is possible to generate broader search areas. |
| similarity | Boolean. Indicator if the output of the function should be sorted based on a Levenshtein edit distance based on the adist() function. Default is 'TRUE'.                                                |

|            |                                                                                                                                                                                                      |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database   | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                        |
| pagelength | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                 |
| verbose    | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings. |
| ...        | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                           |

### Value

A list with all recollected elements from the respective database. Attributes are added to the data.frame, describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find terms at GENESIS that are the same (in spelling) to search term "bus"
# and sort them by Levenshtein edit distance
object <- gen_alternative_terms(term = "bus", similarity = TRUE, database = "genesis")

# Find terms at GENESIS that are related (in spelling) to search term "bus"
object <- gen_alternative_terms(term = "bus*", similarity = TRUE, database = "genesis")

# Find terms at Zensus 2022 that are related (in spelling) to search term "wohn"
object <- gen_alternative_terms(term = "wohn*", similarity = TRUE, database = "zensus")

## End(Not run)
```

---

gen\_auth\_ask

*Helper function for authentication purposes*


---

### Description

Helper function for authentication purposes

### Usage

```
gen_auth_ask(credential_type)
```

### Arguments

credential\_type  
Character string. Type of credential to ask for

**Value**

The user response

---

|              |                                      |
|--------------|--------------------------------------|
| gen_auth_get | <i>Retrieve database credentials</i> |
|--------------|--------------------------------------|

---

**Description**

Function to retrieve the credentials stored via gen\_auth\_save()

**Usage**

```
gen_auth_get(database = NULL)
```

**Arguments**

|          |                                                                                                      |
|----------|------------------------------------------------------------------------------------------------------|
| database | Character string. The database to get the credentials for ('all', 'genesis', 'zensus' and 'region'). |
|----------|------------------------------------------------------------------------------------------------------|

**Value**

Credentials for the database(s) chosen by the user

**Examples**

```
## Not run:  
gen_auth_get("all")  
  
## End(Not run)
```

---

|               |                                                    |
|---------------|----------------------------------------------------|
| gen_auth_path | <i>Helper function for authentication purposes</i> |
|---------------|----------------------------------------------------|

---

**Description**

Helper function for authentication purposes

**Usage**

```
gen_auth_path(...)
```

**Arguments**

|     |                                    |
|-----|------------------------------------|
| ... | Optional arguments for file.path() |
|-----|------------------------------------|

**Value**

A file path for the storage of config files

---

|               |                                  |
|---------------|----------------------------------|
| gen_auth_save | <i>Save database credentials</i> |
|---------------|----------------------------------|

---

## Description

Save credentials of the different databases for further convenient use

## Usage

```
gen_auth_save(database, use_token = FALSE)
```

## Arguments

|           |                                                                                                                                                                |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database  | Character string. The database to store credentials for ('all', 'genesis', 'zensus' or 'regio').                                                               |
| use_token | Boolean. Do you want to (if possible) set an API token instead of password + username? Note: This is not supported by regionalstatistik.de. Defaults to FALSE. |

## Details

Username and password are encrypted and saved as RDS in the package config directory. A random string is generated and stored in the session environment variable GENESIS\_KEY. This string is used as the key to encrypt and decrypt the entered credentials. To avoid having to save authentication in future sessions, GENESIS\_KEY can be added to .Renviron. The {usethis} package includes a helper function for editing .Renviron files from an R session with `usethis::edit_r_environ()`.

## Value

Path to the RDS file in which credentials are saved, invisibly.

## Examples

```
## Not run:  
gen_auth_save("zensus")  
  
## End(Not run)
```

gen\_catalogue

*Search for tables, statistics and cubes***Description**

Function to search for tables, statistics and cubes from GENESIS, Zensus 2022 or regionalstatistik.de. Additionally, it structures the output based on the internal tree structure based on the EVAS numbers. Time-series are represented as cubes with a specified time span. Important note: To be useful in searching for objects it is highly recommended to work with "\*" placeholders (see examples). The placeholder can be placed before and/or after the search term.

**Usage**

```
gen_catalogue(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "statistics", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

**Arguments**

|               |                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code          | String with a maximum length of 15 characters for a database object (GENESIS and regionalstatistik.de) and 15 characters for a Zensus 2022 object. Only one code per iteration. "*" notations are possible.                                                                                                                             |
| database      | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                           |
| category      | Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database. |
| area          | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                  |
| detailed      | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.                                                                                                              |
| sortcriterion | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                   |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pagelength   | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                              |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

### Value

A list with all recalled elements from the API. Based on the 'detailed' parameter, it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

### Examples

```
## Not run:
# Scroll through objects under the topic "12*"
# which is "Bevoelkerung" in GENESIS from all categories and
# with a detailed output
object <- gen_catalogue(code = "12*", detailed = TRUE)

# Search tables under the topic "12*" which is "Bevoelkerung"
# without a detailed output
object <- gen_catalogue(code = "12*", category = "tables")

## End(Not run)
```

---

gen\_cube

*gen\_cube*


---

### Description

Download a cube with data from GENESIS or regionalstatistik.de database

### Usage

```
gen_cube(name, ...)
```

## Arguments

**name** Character string for a cube object (only GENESIS and regionalstatistik.de)  
**...** Further (optional) parameters passed on to the API call:  
**area** Character string. The area in which the table is stored. Possible values:
 

- "public": cube in the public catalogue
- "user": cube in the user's account
- "all": both of the above

**values** Boolean. Should values be included?  
**metadata** Boolean. Should metadata be included?  
**additional** Boolean. Should additional metadata be included?  
**contents** Character string. Names of required statistical specifications  
**startyear, endyear** Four-digit integers. Only retrieve data between these years.  
**timeslices** Integer. Number of timeslices (cumulative to startyear or endyear)  
**regionalvariable** Character string. Code of the regional variable whose value is specified in regionalkey to filter the results.  
**regionalkey** Character string. One or more regional keys. Multiple values can be supplied as a character vector or as a single string, with the regional keys separated by commas. Use of wildcard (\*) allowed.  
**classifyingvariable1, classifyingvariable2, classifyingvariable3** Character string. Code of the subject classification (SK-Merkmal) to which the selection by means of the corresponding classifyingkey parameter is to be applied.  
**classifyingkey1, classifyingkey2, classifyingkey3** Character string. One or more values of a subject classification (e.g. "WZ93012"). Applied to the corresponding classifyingvariable parameter. Multiple keys can be supplied as a character vector or as a single string, with the keys separated by commas. Use of wildcard (\*) allowed.  
**stand** Character string, format: "DD.MM.YYYY". Only retrieve data updated after this date.  
**language** Character string. Search terms, returned messages and data descriptions in German ("de") or English ("en")?  
**...** Additional parameters for the API call (see respective API documentation). A valid specification of these will not be checked by the function, so wrongful specification may lead to errors.

## Value

A [tibble](#). Non-data contents of the data cube object are saved in the metadata [attribute](#) of the data frame.

## Examples

```
## Not run:
gen_cube("47414BJ002")

## End(Not run)
```

---

|                  |                         |
|------------------|-------------------------|
| gen_download_job | <i>gen_download_job</i> |
|------------------|-------------------------|

---

## Description

gen\_download\_job

## Usage

```
gen_download_job(
  name,
  database = c("genesis", "regio"),
  area = c("all", "public", "user"),
  compress = FALSE,
  language = Sys.getenv("RESTATIS_LANG"),
  all_character = TRUE
)
```

## Arguments

|               |                                                                                                                                                                                                                                            |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name          | Character string. The job code retrieved by using <code>gen_list_jobs()</code> .                                                                                                                                                           |
| database      | Character string. Indicator if the GENESIS ('genesis') or regionalstatistik.de ('regio') database is called. Only one database can be addressed per function call. Default option is 'genesis'.                                            |
| area          | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'.                                                                                |
| compress      | Boolean. Should empty rows and columns be discarded? Default is FALSE.                                                                                                                                                                     |
| language      | Character string. Defines if the decimal mark and grouping mark of integers should be represented based on the European (e.g.: '100,5', '200.000,5') or American ('100.5', '200,000.5') system. Defaults to 'Sys.getenv("RESTATIS_LANG")'. |
| all_character | Boolean. Should all variables be imported as 'character' variables? Avoids fuzzy data type conversions if there are leading zeros or other special characters. Defaults to TRUE.                                                           |

## Value

Returns a data.frame with the table content

## Examples

```
## Not run:
gen_download_job("21311-00-01-1_123456789", "regio")

## End(Not run)
```

## Description

Function to search through the databases GENESIS, Zensus 2022 and regionalstatistik.de. It is similar in usage as the search function on the GENESIS main page (<https://www-genesis.destatis.de/genesis/online>). In the search query, "UND" (German word for 'and', also written "und" or "&") as well as "ODER" (German word for 'or', also written "oder" or "|") can be included and logically combined. Furthermore, wildcards are possible by including "\*". If more than one word is included in the term string, 'and' is used automatically to combine the different words. Important note: Time-series are treated as cubes in GENESIS and regionalstatistik.de, they are not longer distinguished. If you want to find a specific object with a clear code with this find function, you need to specify the object type or search for all object types.

## Usage

```
gen_find(
  term = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("all", "tables", "statistics", "variables", "cubes"),
  detailed = FALSE,
  ordering = TRUE,
  pagelength = 500,
  error.ignore = TRUE,
  verbose = TRUE,
  ...
)
```

## Arguments

|          |                                                                                                                                                                                                                                                                                                                                         |
|----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| term     | A character string with no maximum character length, but a word limit of five words.                                                                                                                                                                                                                                                    |
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                           |
| category | Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database. |
| detailed | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.                                                                                                              |
| ordering | A logical. Indicator if the function should return the output of the iteration ordered first based on the fact if the searched term is appearing in the title of the object and secondly on an estimator of the number of variables in this object. Default option is 'TRUE'.                                                           |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| pagelength   | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                             |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                             |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                       |

### Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find objects related to "bus" in GENESIS
object <- gen_find(term = "bus")

# Find tables related to "bus" in GENESIS and return a unordered detailed output
object <- gen_find(term = "bus", detailed = TRUE, ordering = FALSE)

# Find tables related to "Autos" or "Corona" in GENESIS and return a unordered detailed output
object <- gen_find(term = "autos ODER corona", detailed = TRUE, ordering = FALSE)

#' # Find tables related to "Autos" and "Corona" in GENESIS and return a unordered detailed output
object <- gen_find(term = "autos UND corona", detailed = TRUE, ordering = FALSE)

## End(Not run)
```

---

gen\_list\_jobs

gen\_list\_jobs

---

### Description

Function to list all current jobs connected to the given user in the GENESIS or regionalstatistik.de database. Important note: For this function it is also possible to use searchcriterion parameter and selection parameter, making it possible to filter the job list based on 'type','time','status' or 'code'. For more details see vignette("additional\_parameter").

**Usage**

```
gen_list_jobs(
  database = c("genesis", "regio"),
  sortcriterion = c("type", "time", "status", "code"),
  flat = FALSE,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

**Arguments**

|               |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database      | Character string. Indicator if 'genesis' or 'regionalstatistik.de' database is called.                                                                                                                                                                                                                                                                                                                            |
| sortcriterion | Character string. Indicator if the output should be sorted by 'type', 'time', 'status' or 'code'. This is a parameter of the API call itself. The default is 'type'.                                                                                                                                                                                                                                              |
| flat          | Boolean. Should the function return a list with jobs and metadata ('FALSE') or just a flat data.frame ('TRUE')? Defaults to FALSE.                                                                                                                                                                                                                                                                                |
| error.ignore  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose       | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| ...           | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

**Details**

Important information concerning the caching of results: This function's results are *never* cached because there is no use-case for a cached list of jobs (users would always want a refreshed list of jobs and their respective status).

**Value**

A list or data.frame (see parameter 'flat') of all current jobs of the user.

**Examples**

```
## Not run:
gen_list_jobs("regio", flat = TRUE)

## End(Not run)
```

---

|                |                       |
|----------------|-----------------------|
| gen_logincheck | <i>gen_logincheck</i> |
|----------------|-----------------------|

---

### Description

Function to check if a login is possible for a certain database.

### Usage

```
gen_logincheck(database = "all", verbose = TRUE, ...)
```

### Arguments

|          |                                                                                                                                                                                                              |
|----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. If all databases should be checked, use 'all'. Default option is 'all'. |
| verbose  | Boolean. In case of success, should a message be printed? Defaults to 'TRUE'.                                                                                                                                |
| ...      | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                   |

### Value

Leads to an informative error message if the login check failed and returns FALSE invisibly. Invisibly returns TRUE otherwise.

### Examples

```
## Not run:
gen_logincheck("zensus")

## End(Not run)
```

---

|              |                                                             |
|--------------|-------------------------------------------------------------|
| gen_metadata | <i>Search For Meta-Information For All Types Of Objects</i> |
|--------------|-------------------------------------------------------------|

---

### Description

Search for metadata-information for all types of objects and databases and have them returned as a list.

**Usage**

```
gen_metadata(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("cube", "statistic", "table", "variable", "value"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code         | String with a maximum length of 15 characters for a database object (GENESIS, regionalstatistik.de, Zensus 2022). Only one code per iteration.                                                                                                                                                                                                                                                                    |
| database     | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| category     | Character string. Specifying the specific object type of the object that you want meta data for. No default option - you need to specify the object type. Hint: The functions in 'restatis' often return information on object 'Type'.                                                                                                                                                                            |
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| raw          | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                                 |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

**Value**

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find meta-information of the table with the code "11111"
object <- gen_metadata(code = "11111", category = "table", database = "genesis")
```

```
## End(Not run)
```

---

|                   |                          |
|-------------------|--------------------------|
| gen_metadata_cube | <i>gen_metadata_cube</i> |
|-------------------|--------------------------|

---

## Description

Function to search for meta information for a specific cube. Usable only for GENESIS and regionalstatistik.de.

## Usage

```
gen_metadata_cube(
  code = NULL,
  database = c("all", "genesis", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

## Arguments

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code         | A character string with a maximum length of 15 characters. Code from a GENESIS or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                                       |
| database     | Character string. Indicator if the GENESIS ('genesis') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                                             |
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| raw          | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                                 |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see <code>vignette("additional_parameter")</code> .                                                                                                                                                                                                                          |

**Value**

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find meta-information of the cube with the code "11111KE001"
object <- gen_metadata_cube(code = "11111KE001")

## End(Not run)
```

---

```
gen_metadata_statistic
      gen_metadata_statistic
```

---

**Description**

Function to search for meta information for a specific statistic.

**Usage**

```
gen_metadata_statistic(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code         | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                          |
| database     | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |

|         |                                                                                                                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| verbose | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings. |
| raw     | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                    |
| ...     | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                           |

### Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find meta-information of the statistic with the code "12411"
object <- gen_metadata_stats(code = "12411")

## End(Not run)
```

---

|                    |                           |
|--------------------|---------------------------|
| gen_metadata_table | <i>gen_metadata_table</i> |
|--------------------|---------------------------|

---

### Description

Function to search for meta information for a specific table.

### Usage

```
gen_metadata_table(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

### Arguments

|          |                                                                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code     | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.      |
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'. |

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| raw          | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                                 |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

### Value

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find meta-information of the table with the code "11111"
object <- gen_metadata_tab(code = "11111")

## End(Not run)
```

---

|                    |                           |
|--------------------|---------------------------|
| gen_metadata_value | <i>gen_metadata_value</i> |
|--------------------|---------------------------|

---

### Description

Function to search for meta information for a specific value.

### Usage

```
gen_metadata_value(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code         | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                          |
| database     | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| raw          | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                                 |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

**Value**

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find meta-information of the value with the code "LEDIG"
object <- gen_metadata_val(code = "LEDIG")

## End(Not run)
```

---

gen\_metadata\_variable    *gen\_metadata\_variable*

---

**Description**

Function to search for meta information for a specific variable.

**Usage**

```
gen_metadata_variable(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  error.ignore = FALSE,
  verbose = TRUE,
  raw = FALSE,
  ...
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code         | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                          |
| database     | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| area         | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| raw          | Boolean. Should a non-parsed API response be returned? Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                                 |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see <code>vignette("additional_parameter")</code> .                                                                                                                                                                                                                          |

**Value**

A list with all recalled elements from the API. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find meta-information of the variable with the code "FAMSTD"
object <- gen_metadata_var(code = "FAMSTD")

## End(Not run)
```

---

|                   |                          |
|-------------------|--------------------------|
| gen_modified_data | <i>gen_modified_data</i> |
|-------------------|--------------------------|

---

## Description

Function to check for updates, changes, or new objects based on a specific date.

## Usage

```
gen_modified_data(
  code = "",
  database = c("all", "genesis", "zensus", "regio"),
  type = c("all", "tables", "statistics", "statisticsUpdates"),
  date = c("now", "week_before", "month_before", "year_before"),
  pagelength = 500,
  verbose = TRUE,
  ...
)
```

## Arguments

|            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code       | A character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                                                                                                                     |
| database   | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                                                                                                                |
| type       | Character string. Specific GENESIS and regionalstatistik.de object types: 'tables', 'statistics', and 'statisticsUpdates'. Specific Zensus 2022 object types: 'tables' and 'statistics'. All types that are specific for one database can be used together through 'all', which is the default.                                                                                                                                                                                                              |
| date       | Character string. Specific date that is used as the last update or upload time to include an object in return. Default option is 'now', which uses the current date of your system. Alternative options are 'week_before', using the current date of your system minus 7 days, 'month_before', using the current date of your system minus 4 weeks, and 'year_before', using the current date of your system minus 52 weeks. Additionally, it is possible to fill in a specific date of format 'DD.MM.YYYY'. |
| pagelength | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                                                                                                                         |
| verbose    | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                                                                                                                         |
| ...        | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                                                                                                                   |

**Value**

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find objects which were modified last_week
object <- gen_modified_data(date = "week_before")

# Find tables that were new from 31.03.2020
object <- gen_modified_data(type = "tables", date = "31.03.2020")

# Find objects related to the topic "Bevoelkerung" (Code: '12*') which were new today
object <- gen_modified_data(code = "12*")

## End(Not run)
```

---

gen\_objects2stat

*gen\_objects2stat*


---

**Description**

Function to find objects related to a statistic

**Usage**

```
gen_objects2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "variables", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

**Arguments**

|      |                                                                                                                                                                                                              |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code | Character string with a maximum length of 6 characters (15 characters if 'cubes' are not used as a category). Code from a GENESIS, Zensus 2022 or regional-statistik.de object. Only one code per iteration. |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

|               |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database      | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| category      | Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database.                                                                           |
| area          | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| detailed      | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.                                                                                                                                                                                        |
| sortcriterion | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                                                                                             |
| pagelength    | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                              |
| error.ignore  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose       | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| ...           | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

## Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

## Examples

```
## Not run:
# Find cubes from the statistic with the code "21111" with a detailed return
object <- gen_objects2stat(code = "21111", category = "cubes", detailed = T)

# Find all object types from the statistic with the code "12411"
object <- gen_objects2stat(code = "12411")
# Default of detailed-parameter is FALSE, and default of the
# category-parameter is to include all object types.

## End(Not run)
```

---

|                 |                        |
|-----------------|------------------------|
| gen_objects2var | <i>gen_objects2var</i> |
|-----------------|------------------------|

---

## Description

Function to find objects related to a variable

## Usage

```
gen_objects2var(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  category = c("tables", "statistics", "cubes"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

## Arguments

|               |                                                                                                                                                                                                                                                                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code          | Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                  |
| database      | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                           |
| category      | Character string. Specify specific GENESIS/regionalstatistik.de object types ('tables', 'statistics' and 'cubes') and specific Zensus 2022 object types ('tables' and 'statistics'). All types that are specific for one database can be used together. Default option is to use all types that are possible for the specific database. |
| area          | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                  |
| detailed      | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.                                                                                                              |
| sortcriterion | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                   |
| pagelength    | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                    |
| error.ignore  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API                                                                                      |

|         |                                                                                                                                                                                                      |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|         | call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.                                       |
| verbose | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings. |
| ...     | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                           |

## Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

## Examples

```
## Not run:
# Find Tables for Variable "Kreise" and return detailed output
object <- gen_objects2var(code = "Kreise", category = "tables", detailed = T)

# Find everything for Variable "GES"
object <- gen_objects2var(code = "GES")
# Default of detailed-parameter is FALSE, and default of the
# category-parameter is to include all object types.

## End(Not run)
```

---

gen\_search\_vars

*gen\_search\_vars*


---

## Description

Function to search for specific variables

## Usage

```
gen_search_vars(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

**Arguments**

|               |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code          | Character string with a maximum length of 6 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                             |
| database      | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| area          | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                            |
| sortcriterion | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                                                                                             |
| pagelength    | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                              |
| error.ignore  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose       | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                              |
| ...           | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                        |

**Value**

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

**Examples**

```
## Not run:
# Find a specific variable "GES" in Genesis
object <- gen_search_vars("GES")

## End(Not run)
```

---

gen\_signs

*gen\_signs*


---

**Description**

Function to list all currently used special signs (e.g., 0, \*, X, (), p, ...) and their meaning in GENESIS, Zensus 2022 and/or regionalstatistik.de.

**Usage**

```
gen_signs(
  database = c("all", "genesis", "zensus", "regio"),
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

**Arguments**

|              |                                                                                                                                                                                                                                                                                                                                                                                                                   |
|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| database     | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                     |
| error.ignore | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose      | Boolean. In case of success, should a message be printed? Defaults to 'TRUE'.                                                                                                                                                                                                                                                                                                                                     |
| ...          | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see <code>vignette("additional_parameter")</code> .                                                                                                                                                                                                                          |

**Value**

A list of all current used special signs.

---

|           |                  |
|-----------|------------------|
| gen_table | <i>gen_table</i> |
|-----------|------------------|

---

**Description**

Download a table with data from GENESIS, Zensus 2022 or regionalstatistik.de databases

**Usage**

```
gen_table(name, ...)
```

**Arguments**

|          |                                                                                                                                                                                                                                                    |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| name     | Character string. Name/code of the table. Use of wildcards (*) is possible.                                                                                                                                                                        |
| ...      | Optional parameters passed on to the Genesis API call:                                                                                                                                                                                             |
| area     | Character string. The area in which the table is stored. Possible values: <ul style="list-style-type: none"> <li>"public": table in the public catalogue</li> <li>"user": table in the user's account</li> <li>"all": both of the above</li> </ul> |
| compress | Boolean. Should empty rows and columns be discarded?                                                                                                                                                                                               |

transpose Boolean. Reshape the table between "wide" and "long" format.  
 startyear, endyear Four-digit integers. Only retrieve data between these years.  
 regionalvariable Character string. Code of the regional variable whose value is specified in regionalkey to filter the results.  
 regionalkey Character string. One or more regional keys. Multiple values can be supplied as a character vector or as a single string, with the regional keys separated by commas. Use of wildcard (\*) allowed.  
 classifyingvariable1, classifyingvariable2, classifyingvariable3 Character string. Code of the subject classification (SK-Merkmal) to which the selection by means of the corresponding classifyingkey parameter is to be applied.  
 classifyingkey1, classifyingkey2, classifyingkey3 Character string. One or more values of a subject classification (e.g. "WZ93012"). Applied to the corresponding classifyingvariable parameter. Multiple keys can be supplied as a character vector or as a single string, with the keys separated by commas. Use of wildcard (\*) allowed.  
 stand Character string, format: "DD.MM.YYYY". Only retrieve data updated after this date.  
 language Search terms, returned messages and data descriptions in German ("de") or English ("en")?  
 job Boolean. Indicate as to whether a job should be created (not available with the 'Zensus' database). In order to set job = TRUE you have to have username and password saved with gen\_auth\_save(), using API tokens with job = TRUE will result in an error.  
 all\_character Boolean. Should all variables be imported as 'character' variables? Avoids fuzzy data type conversions if there are leading zeros or other special characters. Defaults to TRUE.  
 ... Additional parameters for the API call (see respective API documentation). A valid specification of these will not be checked by the function, so wrongful specification may lead to errors.

## Value

A [tibble](#).

## Examples

```
## Not run:
gen_table("21311-0001", database = "genesis")

## End(Not run)
```

---

|                 |                        |
|-----------------|------------------------|
| gen_update_evas | <i>gen_update_evas</i> |
|-----------------|------------------------|

---

### Description

Function to web scrape the EVAS numbers from the EVAS website and save them as a .rda file. Takes no parameters.

### Usage

```
gen_update_evas()
```

### Value

An updated .rda file containing the latest EVAS numbers

---

|             |                    |
|-------------|--------------------|
| gen_val2var | <i>gen_val2var</i> |
|-------------|--------------------|

---

### Description

Function to extract the possible values from a variable. Values for continuous variables are not extractable, which is why the function returns a warning message in this case.

### Usage

```
gen_val2var(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = TRUE,
  verbose = TRUE,
  ...
)
```

### Arguments

|          |                                                                                                                                                                                        |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code     | Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                 |
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                          |
| area     | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'. |

|               |                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| sortcriterion | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                                                                                            |
| pagelength    | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                             |
| error.ignore  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| verbose       | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                             |
| ...           | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                       |

### Value

A list with all recalled elements from the API. Always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find the values of the variable "DLAND"
object <- gen_val2var(code = "DLAND")

## End(Not run)
```

---

|                  |                         |
|------------------|-------------------------|
| gen_val2var2stat | <i>gen_val2var2stat</i> |
|------------------|-------------------------|

---

### Description

Get values from variables from a statistic. Values for continuous variables cannot be extracted, so the function returns a warning message.

### Usage

```
gen_val2var2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
```

```

    error.ignore.var = FALSE,
    error.ignore.val = TRUE,
    verbose = TRUE,
    ...
  )

```

## Arguments

|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>code</code>             | Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                                                                                                                                                                                                                                                                                                                                                 |
| <code>database</code>         | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                                                                                                                                                                                                                                                                                                                                                          |
| <code>area</code>             | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                                                                                                                                                                                                                                                                                                                                                 |
| <code>detailed</code>         | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'.                                                                                                                                                                                                                                                                                                                             |
| <code>sortcriterion</code>    | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                                                                                                                                                                                                                                  |
| <code>pagelength</code>       | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <code>error.ignore.var</code> | Boolean. Indicator for variables if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE.                                                                                                                        |
| <code>error.ignore.val</code> | Boolean. Indicator for values if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'TRUE', this prevents the function to stop even if a variable has no further explanation (often the case for numerical variables). Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if error.ignore is set to TRUE. |
| <code>verbose</code>          | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                                                                                                                                                                   |
| <code>...</code>              | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see vignette("additional_parameter").                                                                                                                                                                                                                                                                                                                                                                             |

## Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object.

This is done to facilitate further processing with the data. Attributes are added to the data.frame describing the search configuration for the returned output.

## Examples

```
## Not run:
# Find the values of variables in a specific statistic with
# the code "21111" and a detailed description of the variables
object <- gen_val2var2stat(code = "21111", detailed = TRUE)

## End(Not run)
```

---

|              |                     |
|--------------|---------------------|
| gen_var2stat | <i>gen_var2stat</i> |
|--------------|---------------------|

---

## Description

Function to generate variables from statistics

## Usage

```
gen_var2stat(
  code = NULL,
  database = c("all", "genesis", "zensus", "regio"),
  area = c("all", "public", "user"),
  detailed = FALSE,
  sortcriterion = c("code", "content"),
  pagelength = 500,
  error.ignore = FALSE,
  verbose = TRUE,
  ...
)
```

## Arguments

|          |                                                                                                                                                                                                                            |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| code     | Character string with a maximum length of 15 characters. Code from a GENESIS, Zensus 2022 or regionalstatistik.de object. Only one code per iteration.                                                                     |
| database | Character string. Indicator if the GENESIS ('genesis'), Zensus 2022 ('zensus') or regionalstatistik.de ('regio') database is called. Default option is 'all'.                                                              |
| area     | Character string. Indicator from which area of the database the results are called. In general, 'all' is the appropriate solution. Default option is 'all'. Not used for 'statistics'.                                     |
| detailed | Boolean. Indicator if the function should return the detailed output of the iteration including all object-related information or only a shortened output including only code and object title. Default option is 'FALSE'. |

|                            |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <code>sortcriterion</code> | Character string. Indicator if the output should be sorted by 'code' or 'content'. This is a parameter of the API call itself. The default is 'code'.                                                                                                                                                                                                                                                                          |
| <code>pagelength</code>    | Integer. Maximum length of results or objects (e.g., number of tables). Defaults to 500. Maximum of the databases is 25,000 objects.                                                                                                                                                                                                                                                                                           |
| <code>error.ignore</code>  | Boolean. Indicator if the function should stop if an error occurs or no object for the request is found or if it should produce a token as response. Default option is 'FALSE'. Important note: This does not apply to errors generated by the API call itself (especially server or client errors with status codes 5xx or 4xx). In this case, the function call will error even if <code>error.ignore</code> is set to TRUE. |
| <code>verbose</code>       | Boolean. Indicator if the output of the function should include detailed messages and warnings. Default option is 'TRUE'. Set the parameter to 'FALSE' to suppress additional messages and warnings.                                                                                                                                                                                                                           |
| <code>...</code>           | Additional parameters for the API call. These parameters are only affecting the call itself, no further processing. For more details see <code>vignette("additional_parameter")</code> .                                                                                                                                                                                                                                       |

### Value

A list with all recalled elements from the API. Based on the 'detailed' parameter it contains more or less information, but always includes the code of the object, the title, and the type of the object. This is done to facilitate further processing with the data. Attributes are added to the `data.frame` describing the search configuration for the returned output.

### Examples

```
## Not run:
# Find the variables of the statistic with the code "12411"
# with a detailed output
object <- gen_var2stat(code = "12411", detailed = TRUE)

## End(Not run)
```

---

ggsub

*ggsub*


---

### Description

ggsub

### Usage

ggsub(x)

### Arguments

x                      Element to subset with \$Content

---

|                                    |
|------------------------------------|
| insert_and_save_credentials        |
| <i>insert_and_save_credentials</i> |

---

**Description**

insert\_and\_save\_credentials

**Usage**

insert\_and\_save\_credentials(database, use\_token)

**Arguments**

|           |                                                                                                           |
|-----------|-----------------------------------------------------------------------------------------------------------|
| database  | The database to specify credentials for                                                                   |
| use_token | Boolean. Do you want to (if possible) set an API token instead of password + username? Defaults to FALSE. |

---

|                                |
|--------------------------------|
| is_cube_metadata_header        |
| <i>is_cube_metadata_header</i> |

---

**Description**

is\_cube\_metadata\_header

**Usage**

is\_cube\_metadata\_header(lines)

**Arguments**

|       |                           |
|-------|---------------------------|
| lines | Lines to check for header |
|-------|---------------------------|

---

logincheck\_http\_error    *logincheck\_http\_error*

---

**Description**

logincheck\_http\_error

**Usage**

logincheck\_http\_error(database, verbose, ...)

**Arguments**

|          |                                                          |
|----------|----------------------------------------------------------|
| database | The user input to 'gen_logincheck'                       |
| verbose  | Boolean. Should the function message in case of success? |
| ...      | Additional parameters (unchecked)                        |

**Value**

Informative error/warning messages + invisibly TRUE/FALSE

---

logincheck\_stop\_or\_warn  
*logincheck\_stop\_or\_warn*

---

**Description**

logincheck\_stop\_or\_warn

**Usage**

logincheck\_stop\_or\_warn(response, error, verbose, database)

**Arguments**

|          |                                                          |
|----------|----------------------------------------------------------|
| response | A HTTP response object                                   |
| error    | Boolean. Should the function warn or throw an error?     |
| verbose  | Boolean. Should the function message in case of success? |
| database | The database that the check should be run for            |

**Value**

In case of failure warns or errors. Invisibly returns TRUE (success) or FALSE (failure)

---

|                                |
|--------------------------------|
| param_check_regionalkey        |
| <i>param_check_regionalkey</i> |

---

**Description**

param\_check\_regionalkey

**Usage**

param\_check\_regionalkey(regionalkey)

**Arguments**

regionalkey      Regional key

---

|                  |                         |
|------------------|-------------------------|
| param_check_year | <i>param_check_year</i> |
|------------------|-------------------------|

---

**Description**

param\_check\_year

**Usage**

param\_check\_year(year)

**Arguments**

year              Year as parameter value

---

|                    |                           |
|--------------------|---------------------------|
| param_collapse_vec | <i>param_collapse_vec</i> |
|--------------------|---------------------------|

---

**Description**

param\_collapse\_vec

**Usage**

param\_collapse\_vec(vec)

**Arguments**

vec              Vector to be collapsed

---

|           |                  |
|-----------|------------------|
| read_cube | <i>read_cube</i> |
|-----------|------------------|

---

**Description**

read\_cube

**Usage**

read\_cube(resp)

**Arguments**

resp                    API response object resulting from a call to 'data/cubefile'

---

|                 |                        |
|-----------------|------------------------|
| read_cube_block | <i>read_cube_block</i> |
|-----------------|------------------------|

---

**Description**

read\_cube\_block

**Usage**

read\_cube\_block(lines)

**Arguments**

lines                   Lines to read as header

---

|                      |                             |
|----------------------|-----------------------------|
| read_cube_data_lines | <i>read_cube_data_lines</i> |
|----------------------|-----------------------------|

---

**Description**

read\_cube\_data\_lines

**Usage**

read\_cube\_data\_lines(lines, col\_names)

**Arguments**

lines                   Lines to read data from  
col\_names               Specify column names

---

|                                  |
|----------------------------------|
| read_cube_metadata_header        |
| <i>read_cube_metadata_header</i> |

---

**Description**

read\_cube\_metadata\_header

**Usage**

read\_cube\_metadata\_header(line, rename\_dups = TRUE)

**Arguments**

|             |                    |
|-------------|--------------------|
| line        | Line to read       |
| rename_dups | Rename duplicates? |

---

|                                 |
|---------------------------------|
| rename_cube_data_columns        |
| <i>rename_cube_data_columns</i> |

---

**Description**

rename\_cube\_data\_columns

**Usage**

rename\_cube\_data\_columns(cube)

**Arguments**

|      |                                        |
|------|----------------------------------------|
| cube | A cube object to rename the columns in |
|------|----------------------------------------|

---

|                 |                        |
|-----------------|------------------------|
| resp_check_data | <i>resp_check_data</i> |
|-----------------|------------------------|

---

**Description**

resp\_check\_data

**Usage**

resp\_check\_data(resp)

**Arguments**

|      |                 |
|------|-----------------|
| resp | Response object |
|------|-----------------|

---

|                     |                            |
|---------------------|----------------------------|
| return_table_object | <i>return_table_object</i> |
|---------------------|----------------------------|

---

**Description**

return\_table\_object

**Usage**

return\_table\_object(response, response\_type, language, all\_character)

**Arguments**

- response      Response object
- response\_type      Response type
- language      Language locale
- all\_character      Read all variables as character?

---

|                      |                             |
|----------------------|-----------------------------|
| set_credentials_auth | <i>set_credentials_auth</i> |
|----------------------|-----------------------------|

---

**Description**

set\_credentials\_auth

**Usage**

set\_credentials\_auth(path, sys\_env, ui\_menu\_database, use\_token)

**Arguments**

- path      Path for the .rds file
- sys\_env      System environment variable name for the key
- ui\_menu\_database      The database for the auth request ('GENESIS' or 'Zensus 2022')
- use\_token      Boolean. Do you want to (if possible) set an API token instead of password + username? Defaults to FALSE.

---

|                   |                          |
|-------------------|--------------------------|
| spezifisch_create | <i>spezifisch_create</i> |
|-------------------|--------------------------|

---

**Description**

spezifisch\_create

**Usage**

spezifisch\_create(x)

**Arguments**

|   |                                      |
|---|--------------------------------------|
| x | Element to extract \$Spezifisch from |
|---|--------------------------------------|

---

|            |                   |
|------------|-------------------|
| split_cube | <i>split_cube</i> |
|------------|-------------------|

---

**Description**

split\_cube

**Usage**

split\_cube(lines)

**Arguments**

|       |                       |
|-------|-----------------------|
| lines | Lines to split a cube |
|-------|-----------------------|

---

|                        |                               |
|------------------------|-------------------------------|
| test_database_function | <i>test_database_function</i> |
|------------------------|-------------------------------|

---

**Description**

test\_database\_function

**Usage**

test\_database\_function(input, error.input, text)

**Arguments**

|             |                                 |
|-------------|---------------------------------|
| input       | Input to test for database name |
| error.input | Indicator error.ignore          |
| text        | Indicator verbose               |

---

|               |                      |
|---------------|----------------------|
| test_if_error | <i>test_if_error</i> |
|---------------|----------------------|

---

**Description**

test\_if\_error

**Usage**

test\_if\_error(input, para, verbose = NULL)

**Arguments**

|         |                      |
|---------|----------------------|
| input   | Response object      |
| para    | Parameter TRUE/FALSE |
| verbose | Verbose TRUE/FALSE   |

---

|                    |                           |
|--------------------|---------------------------|
| test_if_error_find | <i>test_if_error_find</i> |
|--------------------|---------------------------|

---

**Description**

test\_if\_error\_find

**Usage**

test\_if\_error\_find(input, para, verbose = NULL)

**Arguments**

|         |                      |
|---------|----------------------|
| input   | Response object      |
| para    | Parameter TRUE/FALSE |
| verbose | Verbose TRUE/FALSE   |

---

|                     |                            |
|---------------------|----------------------------|
| test_if_error_light | <i>test_if_error_light</i> |
|---------------------|----------------------------|

---

**Description**

test\_if\_error\_light

**Usage**

test\_if\_error\_light(input, verbose = NULL)

**Arguments**

|         |                    |
|---------|--------------------|
| input   | Response object    |
| verbose | Verbose TRUE/FALSE |

---

|                         |                                |
|-------------------------|--------------------------------|
| test_if_error_variables | <i>test_if_error_variables</i> |
|-------------------------|--------------------------------|

---

**Description**

test\_if\_error\_variables

**Usage**

test\_if\_error\_variables(input, para)

**Arguments**

|       |                      |
|-------|----------------------|
| input | Response object      |
| para  | Parameter TRUE/FALSE |

---

|              |                     |
|--------------|---------------------|
| test_if_json | <i>test_if_json</i> |
|--------------|---------------------|

---

**Description**

test\_if\_json

**Usage**

test\_if\_json(input)

**Arguments**

|       |                 |
|-------|-----------------|
| input | Response object |
|-------|-----------------|

---

|              |                     |
|--------------|---------------------|
| test_if_okay | <i>test_if_okay</i> |
|--------------|---------------------|

---

**Description**

test\_if\_okay

**Usage**

test\_if\_okay(input)

**Arguments**

|       |                 |
|-------|-----------------|
| input | Response object |
|-------|-----------------|

---

|                         |                                |
|-------------------------|--------------------------------|
| test_if_process_further | <i>test_if_process_further</i> |
|-------------------------|--------------------------------|

---

**Description**

test\_if\_process\_further

**Usage**

test\_if\_process\_further(input, para, verbose = NULL)

**Arguments**

|         |                      |
|---------|----------------------|
| input   | Response object      |
| para    | Parameter TRUE/FALSE |
| verbose | Verbose TRUE/FALSE   |

---

|              |                     |
|--------------|---------------------|
| titel_search | <i>titel_search</i> |
|--------------|---------------------|

---

**Description**

titel\_search

**Usage**

titel\_search(x, term, text)

**Arguments**

- |      |                                   |
|------|-----------------------------------|
| x    | Element to extract \$Content from |
| term | Search term                       |
| text | Indicator verbose                 |

# Index

- \* **datasets**
  - evas\_list, [6](#)
  - .gen\_api\_core, [3](#)
- attribute, [13](#)
- binding\_lapply, [4](#)
- check\_function\_input, [4](#)
- check\_results, [5](#)
- evas\_list, [6](#)
- find\_token, [6](#)
- forming\_evas, [7](#)
- gen\_alternative\_terms, [7](#)
- gen\_auth\_ask, [8](#)
- gen\_auth\_get, [9](#)
- gen\_auth\_path, [9](#)
- gen\_auth\_save, [10](#)
- gen\_catalogue, [11](#)
- gen\_cube, [12](#)
- gen\_download\_job, [14](#)
- gen\_find, [15](#)
- gen\_list\_jobs, [16](#)
- gen\_logincheck, [18](#)
- gen\_metadata, [18](#)
- gen\_metadata\_cube, [20](#)
- gen\_metadata\_statistic, [21](#)
- gen\_metadata\_table, [22](#)
- gen\_metadata\_value, [23](#)
- gen\_metadata\_variable, [24](#)
- gen\_modified\_data, [26](#)
- gen\_objects2stat, [27](#)
- gen\_objects2var, [29](#)
- gen\_search\_vars, [30](#)
- gen\_signs, [31](#)
- gen\_table, [32](#)
- gen\_update\_evas, [34](#)
- gen\_val2var, [34](#)
- gen\_val2var2stat, [35](#)
- gen\_var2stat, [37](#)
- ggsub, [38](#)
- insert\_and\_save\_credentials, [39](#)
- is\_cube\_metadata\_header, [39](#)
- logincheck\_http\_error, [40](#)
- logincheck\_stop\_or\_warn, [40](#)
- param\_check\_regionalkey, [41](#)
- param\_check\_year, [41](#)
- param\_collapse\_vec, [41](#)
- read\_cube, [42](#)
- read\_cube\_block, [42](#)
- read\_cube\_data\_lines, [42](#)
- read\_cube\_metadata\_header, [43](#)
- rename\_cube\_data\_columns, [43](#)
- resp\_check\_data, [43](#)
- return\_table\_object, [44](#)
- set\_credentials\_auth, [44](#)
- spezifisch\_create, [45](#)
- split\_cube, [45](#)
- test\_database\_function, [45](#)
- test\_if\_error, [46](#)
- test\_if\_error\_find, [46](#)
- test\_if\_error\_light, [47](#)
- test\_if\_error\_variables, [47](#)
- test\_if\_json, [47](#)
- test\_if\_okay, [48](#)
- test\_if\_process\_further, [48](#)
- tibble, [13](#), [33](#)
- titel\_search, [49](#)
- usethis::edit\_r\_envron(), [10](#)