# Package ‘odns’

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**Title**  Access Scottish Health and Social Care Open Data  

**Version**  1.0.2  

**Description**  Allows potential users of Scottish Health and Social Care Open Data (<https://www.opendata.nhs.scot/>) to easily explore and extract the available data.  

**License**  GPL (>= 3)  

**URL**  https://github.com/jrh-dev/odns  

**BugReports**  https://github.com/jrh-dev/odns/issues  

**Encoding**  UTF-8  

**RoxygenNote**  7.2.1  

**Depends**  R (>= 3.5.0)  

**Imports**  glue, httr, utils, data.table, jsonlite  

**Suggests**  knitr, rmarkdown, testthat (>= 3.0.0), mockery, digest  

**VignetteBuilder**  knitr  

**Config/testthat/edition**  3  

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all_packages

Details packages available from <opendata.nhs.scot>.

Description

Details all packages available from <opendata.nhs.scot> in a data.frame along with the package id, with the option to limit results based on a search term.

Usage

all_packages(contains = NULL, limit = 1000L)

Arguments

contains a character string containing an expression to be used as search criteria against the packages ‘title’ field.

limit a numeric value specifying the maximum number of rows to be returned. Defaults to 1000L.

Value

a data.frame containing the names of all available packages and their package ids, or those whose name contains the string specified in the contains argument.

Examples

## Not run:
all_packages()
all_packages(contains = "standard-populations")

## End(Not run)
Provides an overview of all resources available from <open-data.nhs.scot>.

Description

Provides an overview of all resources available from <opendata.nhs.scot>, with the option to limit results based on both package and resource names. The returned data.frame can be used to look-up package and resource ids and is useful for exploring the available data sets.

Usage

all_resources(package_contains = NULL, resource_contains = NULL)

Arguments

package_contains
   a character string containing an expression to be used as search criteria against the packages 'title' field.

resource_contains
   a character string containing a regular expression to be matched against available resource names. If a character vector > length 1 is supplied, the first element is used.

Value

a data.frame containing details of all available packages and resources, or those containing the string specified in the package_contains and resource_contains arguments.

Examples

## Not run:
all_resources()
all_resources(package_contains = "standard-populations")
all_resources(
   package_contains = "standard-populations", resource_contains = "European"
)

## End(Not run)
**cap_url**

*Produces error if input exceeds 2000 characters.*

**Description**

Used to ensure constructed URLs do not exceed 2000 characters.

**Usage**

`cap_url(x)`

**Arguments**

- `x` a character string to check.

**Value**

invisible.

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**detect_error**

*Detects http errors and provides enhanced details.*

**Description**

Detects http errors and provides enhanced details.

**Usage**

`detect_error(result)`

**Arguments**

- `result` A http response.

**Value**

invisible
get_data

Get data from a resource.

Description

Get data from a resource in tabular format with the option to select fields and perform basic filtering. Where multiple data sets are required from a package and/or no field selection and filtering is required the get_resource function can be used.

Usage

get_data(resource, fields = NULL, limit = NULL, where = NULL, page_size = NULL)

Arguments

- resource: A character string containing the resource id of the data set to be returned.
- fields: A character vector containing the names of fields to be included in the returned table. The input is checked to ensure the specified fields exist in the chosen resource.
- limit: An integer specifying the maximum number of records to be returned, the default NULL value returns all records.
- where: A character string containing the 'WHERE' element of a simple SQL SELECT style query. Field names must be double quoted "", non-numeric values must be single quoted ', and both single and double quotes must be delimited. Example: where = ""AgeGroup" = 45-49 years"".
- page_size: An integer specifying the maximum number of records to be returned per query. Setting a value causes the use of offset pagination, multiple queries will be sent to return subsets of the available data. Subsets are joined before being returned. The default NULL value will always attempt to return all rows with a single query.

Value

A data.frame.

Examples

```r
## Not run:
get_data(resource = "edee9731-daf7-4e0d-b525-e4c1469b8f69")

get_data(
  resource = "edee9731-daf7-4e0d-b525-e4c1469b8f69",
  fields = c("AgeGroup", "EuropeanStandardPopulation"),
  where = ""AgeGroup" = 45-49 years"
)
## End(Not run)
```
get_resource

Get one or more resources or all resources within a package.

Description
Get data from one or more resources, or all resources within a package, as a list, with each resource in tabular format. Where field selection and/or filtering of data is required the get_data function can be used.

Usage
get_resource(package = NULL, resource = NULL, limit = Inf)

Arguments

package A character vector specifying package ids or names. If the resource argument is not provided all resources under each of the specified packages will be returned. The package argument itself is optional, but one of package or resource arguments must be provided.

resource A character vector specifying resource ids or names. If the package argument is also provided then resources will only be returned if they exist under one of the specified packages, otherwise each of the specified resources will be returned. The resource argument itself is optional, but one of resource or package arguments must be provided.

limit A numeric value specifying the maximum number of rows to be returned. Default value Inf returns all rows. Note; when multiple resources are returned the limit applies to each.

Value
A list containing all the resources within a package, or those specified, as data.frames.

Examples
## Not run:
get_resource(
    package = "4dd86111-7326-48c4-8763-8cc4aa190c3e",
    limit = 5L
)

get_resource(
    package = "4dd86111-7326-48c4-8763-8cc4aa190c3e",
    resource = "edee9731-daf7-4e0d-b525-e4c1469b8f69",
    limit = 5L
)

get_resource(
    package = "standard-populations",
)
nrow_resource

resource = "European Standard Population",
limit = 5L
)

get_resource(
  resource = "European Standard Population",
  limit = 5L
)

## End(Not run)

\section*{nrow_resource}

\textit{Get the number of rows present in a resource.}

\subsection*{Description}

Get the number of rows present in a resource.

\subsection*{Usage}

\fct{nrow_resource}{resource}

\subsection*{Arguments}

\begin{itemize}
  \item \texttt{resource} \hspace{1em} A character string containing the resource id of the data set to be returned.
\end{itemize}

\subsection*{Value}

An integer of length 1 indicating the number of rows present in the specified resource.

\subsection*{Examples}

\begin{verbatim}
## Not run:
nrow_resource(resource = "edee9731-daf7-4e0d-b525-e4c1469b8f69")

## End(Not run)
\end{verbatim}
package_metadata  Get metadata for a package.

Description
Get a specified packages metadata as a list.

Usage
package_metadata(package)

Arguments
package  A character vector of length 1 specifying a package id or name which identifies the package for which metadata should be returned.

Value
a list containing the package metadata.

Examples
## Not run:
package_metadata(package = "standard-populations")
package_metadata(package = "4dd86111-7326-48c4-8763-8cc4aa190c3e")
## End(Not run)

prep_nosql_query  Prepare an API query without SQL.

Description
Prepare an API query without SQL.

Usage
prep_nosql_query(resource, fields, limit, offset)

Arguments
resource  A character string specifying resource id of the data set to be returned.
fields  A character vector specifying the names of fields to be included in the returned data.
limit  A numeric value specifying the maximum number of rows to be returned.
offset  A numeric value specifying the number of rows to skip.
**prep_sql_query**

**Value**

A character string containing the prepared query.

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**Description**

Prepare an API query with SQL.

**Usage**

`prep_sql_query(resource, fields, limit, offset, where)`

**Arguments**

- `resource`: a character string specifying resource id of the data set to be returned.
- `fields`: a character vector specifying the names of fields to be included in the returned data.
- `limit`: A numeric value specifying the maximum number of rows to be returned.
- `offset`: A numeric value specifying the number of rows to skip.
- `where`: A character string containing the 'WHERE' element of a simple SQL SELECT style query. Field names must be double quoted ("), non numeric values must be single quoted (\code{"). and both single and double quotes must be delimited. Example: where = "\"AgeGroup\" = \'45-49 years\'".

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**resource_data_items**

**Get a table of available fields and their types for a specified resource.**

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**Description**

Get a table of available fields and their types for a specified resource.

**Usage**

`resource_data_items(resource)`

**Arguments**

- `resource`: A character string containing the resource id of the resource for which information is to be returned.
resource_metadata

Value

A data.frame detailing the names and types of all fields available for the chosen resource.

Examples

```r
## Not run:
resource_data_items(resource="edee9731-daf7-4e0d-b525-e4c1469b8f69")

## End(Not run)
```

resource_metadata  Get metadata for a resource.

Description

Get a specified resources metadata as a list.

Usage

```r
resource_metadata(resource)
```

Arguments

- `resource`: A character vector of length 1 specifying a resource id which identifies the resource for which metadata should be returned.

Value

A list containing the resource metadata.

Examples

```r
## Not run:
resource_metadata(resource = "edee9731-daf7-4e0d-b525-e4c1469b8f69")

## End(Not run)
```
valid_id

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**Description**

Basic check of whether the characters in a string is equal to 36

**Usage**

`valid_id(x)`

**Arguments**

- `x` A character string.

**Value**

logical value indicating whether the string checked consists of 36 characters.
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