

# Package ‘dhis2r’

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**Title** Client for the 'DHIS2' Web API

**Version** 0.3.0

**Description**

Connect and pull data from a 'DHIS2 (District Health Information Software 2)' instance into R.

**License** MIT + file LICENSE

**URL** <https://github.com/amanyiraho/dhis2r>

**BugReports** <https://github.com/amanyiraho/dhis2r/issues>

**Imports** attempt (>= 0.3.1), curl (>= 4.3.3), dplyr (>= 1.0.10), httr2 (>= 0.2.2), R6 (>= 2.5.1)

**Suggests** covr, httptest2, knitr, rmarkdown, testthat

**Depends** R (>= 4.1.0)

**Encoding** UTF-8

**VignetteBuilder** knitr

**RoxygenNote** 7.3.1

**LazyData** true

**NeedsCompilation** no

**Author** Robinson Amanyiraho [cre, aut, cph]  
(<https://orcid.org/0000-0002-7747-1367>)

**Maintainer** Robinson Amanyiraho <amanyiraho@gmail.com>

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Dhis2r

*Connect and pull/get data from a DHIS2 instance*

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### Description

To create a DHIS2 connection, you need a DHIS2 base URL, username, password, and an API version. The R6 Class called 'Dhis2r' representing a DHIS2 instance connection.

### Format

An R6 class called Dhis2r.

### Details

You can use a DHIS2 instance connection to get data several times without needing to manually supply your user credentials on each API call.

### Public fields

request\_sent The request used to perform an API call

name Name of the user

access\_rights The access rights the user has on the DHIS2 instance

account\_info Information of the logged account credentials

### Methods

#### Public methods:

- [Dhis2r\\$new\(\)](#)
- [Dhis2r\\$get\\_user\\_info\(\)](#)
- [Dhis2r\\$get\\_metadata\(\)](#)
- [Dhis2r\\$get\\_metadata\\_fields\(\)](#)
- [Dhis2r\\$get\\_analytics\(\)](#)
- [Dhis2r\\$get\\_any\\_analytic\(\)](#)
- [Dhis2r\\$clone\(\)](#)

**Method new():** Create a connection to a DHIS2 instance using basic authentication

*Usage:*

```
Dhis2r$new(  
  base_url,  
  username = NULL,  
  password = NULL,  
  api_token = NULL,  
  api_version = NULL,  
  api_version_position = c("after", "before")  
)
```

*Arguments:*

base\_url Base url e.g https://play.dhis2.org/  
 username Registered username e.g "admin"  
 password Registered password e.g "district"  
 api\_token Personal Access Token (PAT) to use instead of username and password  
 api\_version The api version e.g "33"  
 api\_version\_position position where the api\_version is after or before in web API url i.e /api/

*Returns:* A new 'Dhis2r' object

**Method** get\_user\_info(): Get information of the logged in user

*Usage:*

```
Dhis2r$get_user_info()
```

*Returns:* A vector

**Method** get\_metadata(): Get metadata about any available resource from a DHIS2 instance e.g "dataElements", "organisationUnits", "indicators", "periodTypes"

*Usage:*

```
Dhis2r$get_metadata(endpoint = NULL, fields = c("name", "id"))
```

*Arguments:*

endpoint a resource, get the available resources using 'get\_metadata()' without any arguments  
 fields The specific columns to be return in the dataframe e.g c("name","id")

*Returns:* A data frame

**Method** get\_metadata\_fields(): Get all possible fields for a specific metadata resource from a DHIS2 instance

*Usage:*

```
Dhis2r$get_metadata_fields(endpoint)
```

*Arguments:*

endpoint a resource, get the available resources using 'get\_metadata()' without any arguments

*Returns:* A vector of all possible fields for a specific metadata

**Method** get\_analytics(): Get all possible analytics resources from a DHIS2 instance i.e

*Usage:*

```
Dhis2r$get_analytics(
  analytic,
  org_unit,
  period,
  output_scheme = c("UID", "NAME")
)
```

*Arguments:*

analytic vector of ID of specific analytic(s) from a DHIS2 instance

org\_unit vector of ID of specific organisation unit(s) from a DHIS2 instance

period vector of relative or fixed periods from a DHIS2 instance  
 output\_scheme Output type ID or Names of fields

*Returns:* A data frame of the analytics resource

**Method** `get_any_analytic()`: Get all any analytics resource from a DHIS2 instance to cater for long DHIS2 favorites

*Usage:*

```
Dhis2r$get_any_analytic(endpoint_url)
```

*Arguments:*

endpoint\_url string part of Analytic(s) from a DHIS2 instance api endpoint starting from 'analytics.json?dimension='

*Returns:* A data frame of the analytics resource

**Method** `clone()`: The objects of this class are cloneable with this method.

*Usage:*

```
Dhis2r$clone(deep = FALSE)
```

*Arguments:*

deep Whether to make a deep clone.

## Examples

```
# Load dhis2r
library(dhis2r)
# connect to the DHIS2 instance
dhis2_play_connection <- Dhis2r$new(base_url = "https://play.im.dhis2.org/stable-2-40-5",
  username = "admin",
  password = "district")

# get all the available resources
dhis2_play_connection$get_metadata()

# get organisation Units with the default fields i.e c("name","id")

dhis2_play_connection$get_metadata(endpoint = "organisationUnits")

# get a vector of all possible fields of a organisation unit resource
dhis2_play_connection$get_metadata_fields(endpoint = "organisationUnits")

# get organisation Units with additional fields i.e c("name","id", "level")

dhis2_play_connection$get_metadata(endpoint = "organisationUnits",
  fields = c("name","id", "level"))

dhis2_play_connection$get_analytics(analytic = c("Uvn6LCg7dVU"),
  org_unit = c("06uwpzGd5pu", "fdc6uOvgoji"),
  period = "LAST_12_MONTHS",
  output_scheme = "NAME")
```

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dhis2\_error\_message     *Provide additional error information*

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**Description**

Provide additional error information

**Usage**

```
dhis2_error_message(resp)
```

**Arguments**

resp                    response to be captured

**Value**

An error character vector

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relative\_periods     *Relative periods in DHIS2*

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**Description**

The relative periods are relative to the current date and allow e.g. for creating dynamic reports

**Usage**

```
data(relative_periods)
```

**Format**

A data frame with 30 rows and 2 columns:

**period\_type** Period type

**period** Relative period to be used

**Source**

"<https://docs.dhis2.org/en/develop/using-the-api/dhis-core-version-239/introduction.html>"

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## \* **datasets**

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