

# Package ‘ROhdsiWebApi’

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**Type** Package

**Title** R package to allow interactivity with a WebApi instance

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**Description** Includes R wrappers for calling WebAPI web services.

**License** Apache License 2.0

**Depends** R (>= 3.1.0),

**Imports** RJSONIO,  
httr (>= 1.3.1),  
openxlsx (>= 4.0.17),  
jsonlite,  
dplyr,  
tibble,  
SqlRender

**Suggests** testthat

**URL** <https://github.com/OHDSI/ROhdsiWebApi>

**BugReports** <https://github.com/OHDSI/ROhdsiWebApi/issues>

**NeedsCompilation** no

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**Encoding** UTF-8

## R topics documented:

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## createConceptSetWorkbook

*Save a set of concept sets expressions, included concepts, and mapped concepts into a workbook*

---

### Description

Save a set of concept sets expressions, included concepts, and mapped concepts into a workbook

### Usage

```
createConceptSetWorkbook(conceptSetIds, workFolder = NULL, baseUrl,
  included = FALSE, mapped = FALSE)
```

### Arguments

|               |   |
|---------------|---|
| conceptSetIds | A vector of concept set IDs.  |
| workFolder    | Directory location where the workbook will be saved, defaults to working directory. |
| baseUrl       | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".   |
| included      | Should included concepts be included in the workbook?                               |
| mapped        | Should mapped concepts be included in the workbook?                                 |

### Value

A xlsx workbook (conceptSetExpressions.xlsx) that includes a list of all concept set IDs and names and a worksheet for the concepts in each set. Options to include an included concepts and mapped concepts worksheet for each concept set are available.

---

|               |  |
|---------------|--|
| getCdmSources | <i>Get the data sources in the WebAPI instance</i> |
|---------------|--|

---

**Description**

Get the data sources in the WebAPI instance

**Usage**

```
getCdmSources(baseUrl)
```

**Arguments**

|         |   |
|---------|---|
| baseUrl | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
|---------|---|

**Details**

Obtains the data sources configured in the WebAPI instance

**Value**

A data frame of data source information

---

|                                  |  |
|----------------------------------|--|
| getCohortCharacterizationResults | <i>Get Cohort Characterization Results</i> |
|----------------------------------|--|

---

**Description**

Get Cohort Characterization Results

**Usage**

```
getCohortCharacterizationResults(baseUrl, characterizationId,  
  generationId = NULL, sourceKey, cohortIds = c(), domains = c(),  
  analysisNames = c())
```

**Arguments**

|                    |   |
|--------------------|---|
| baseUrl            | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".   |
| characterizationId | The id of the cohort characterization in Atlas  |
| generationId       | Used to specify the id of a particular generation of a cohort characterization. By default, the latest execution is retrieved |
| sourceKey          | The source key for a CDM instance in WebAPI, as defined in the Configuration page   |
| cohortIds          | (OPTIONAL) Which cohort definition ids would you like to retrieve? By default, all cohorts are retrieved.                     |

|               |   |
|---------------|---|
| domains       | (OPTIONAL) Which feature domains would you like to retrieve? By default, all domains are retrieved.         |
| analysisNames | (OPTIONAL) Which feature analysis names would you like to retrieve? By default, all analyses are retrieved. |

---

```
getCohortDefinitionExpression
```

*Get a cohort definition expression*

---

## Description

Get a cohort definition expression

## Usage

```
getCohortDefinitionExpression(definitionId, baseUrl)
```

## Arguments

|              |   |
|--------------|---|
| definitionId | The number indicating which cohort definition to fetch.                           |
| baseUrl      | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |

## Details

Obtain the JSON expression from WebAPI for a given cohort id

## Value

A JSON list object representing the cohort definition

## Examples

```
## Not run:
# This will obtain a cohort definition's JSON expression:

getCohortDefinitionExpression(definitionId = 282, baseUrl = "http://server.org:80/WebAPI")

## End(Not run)
```

---

`getCohortDefinitionName`*Get a cohort definition's name from WebAPI*

---

**Description**

Get a cohort definition's name from WebAPI

**Usage**

```
getCohortDefinitionName(baseUrl, definitionId, formatName = FALSE)
```

**Arguments**

|                           |   |
|---------------------------|---|
| <code>baseUrl</code>      | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| <code>definitionId</code> | The cohort definition id in Atlas.  |
| <code>formatName</code>   | Should the name be formatted to remove prefixes and underscores?                  |

**Details**

Obtains the name of a cohort.

**Value**

The name of the cohort.

---

`getCohortDefinitionSql`*Get a cohort definition's SQL from WebAPI*

---

**Description**

Get a cohort definition's SQL from WebAPI

**Usage**

```
getCohortDefinitionSql(baseUrl, definitionId, generateStats = TRUE)
```

**Arguments**

|                            |  |
|----------------------------|--|
| <code>baseUrl</code>       | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".  |
| <code>definitionId</code>  | The cohort definition id in Atlas.   |
| <code>generateStats</code> | Should the SQL include the code for generating inclusion rule statistics? Note that if TRUE, several additional tables are expected to exist as described in the details. By default this is TRUE. |

**Details**

Obtains the template SQL of a cohort. When using generateStats = TRUE, the following tables are required to exist when executing the SQL: cohort\_inclusion, cohort\_inclusion\_result, cohort\_inclusion\_stats, and cohort\_summary\_stats. Also note that the cohort\_inclusion table should be populated with the names of the rules prior to executing the cohort definition SQL.

**Value**

The templated SQL to generate the cohort

---

```
getCohortGenerationStatuses
```

*Get Cohort Generation Statuses*

---

**Description**

Get Cohort Generation Statuses

**Usage**

```
getCohortGenerationStatuses(baseUrl, definitionIds, sourceKeys = NULL)
```

**Arguments**

|               |  |
|---------------|--|
| baseUrl       | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".  |
| definitionIds | A list of cohort definition Ids  |
| sourceKeys    | (OPTIONAL) A list of CDM source keys. These can be found in Atlas -> Configure. Otherwise, all CDM source keys will be used. |

**Details**

Obtains cohort generation statuses for a collection of cohort definition Ids and CDM sources. Useful if running multiple cohort generation jobs that are long-running.

**Value**

A data frame of cohort generation statuses, start times, and execution durations per definition id and source key.

---

`getCohortInclusionRulesAndCounts`*Get cohort inclusion rules and person counts*

---

**Description**

Get cohort inclusion rules and person counts

**Usage**

```
getCohortInclusionRulesAndCounts(baseUrl, cohortId, sourceKey)
```

**Arguments**

|                        |   |
|------------------------|---|
| <code>baseUrl</code>   | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| <code>cohortId</code>  | The Atlas cohort definition id for the cohort                                     |
| <code>sourceKey</code> | The source key for a CDM instance in WebAPI, as defined in the Configuration page |

**Details**

Obtains the inclusion rules from a cohort definition and summarizes the person counts per rule

---

`getConceptSetConceptIds`*Get Concept Set Concept Ids*

---

**Description**

Get Concept Set Concept Ids

**Usage**

```
getConceptSetConceptIds(baseUrl, setId, vocabSourceKey = NULL)
```

**Arguments**

|                             |   |
|-----------------------------|---|
| <code>baseUrl</code>        | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| <code>setId</code>          | The concept set id in Atlas.  |
| <code>vocabSourceKey</code> | The source key of the Vocabulary. By default, the priority Vocabulary is used.    |

**Details**

Obtains the full list of concept Ids in a concept set.

**Value**

A list of concept Ids.

---

`getConceptSetExpression`*Get a concept set expression*

---

**Description**

Get a concept set expression

**Usage**

```
getConceptSetExpression(baseUrl, setId, asDataFrame = FALSE)
```

**Arguments**

|                          |   |
|--------------------------|---|
| <code>baseUrl</code>     | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| <code>setId</code>       | The concept set id in Atlas.  |
| <code>asDataFrame</code> | (OPTIONAL) Get expression as data frame   |

**Details**

Obtain the JSON expression from WebAPI for a given concept set

**Value**

A JSON list object representing the concept set

**Examples**

```
## Not run:  
# This will obtain a concept set's JSON expression:  
  
getConceptSetExpression(setId = 282, baseUrl = "http://server.org:80/WebAPI")  
  
## End(Not run)
```

---

`getConceptSetName`*Get a concept set's name from WebAPI*

---

**Description**

Get a concept set's name from WebAPI

**Usage**

```
getConceptSetName(baseUrl, setId, formatName = FALSE)
```



**Arguments**

|            |   |
|------------|---|
| baseUrl    | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| setId      | The concept set id in Atlas.  |
| formatName | Should the name be formatted to remove prefixes and underscores?                  |

**Details**

Obtains the name of a concept set.

**Value**

The name of the concept set.

---

getConceptSetsAndConceptsFromCohort

*Get a list of concept sets and included/mapped concepts from a cohort definition*

---

**Description**

Get a list of concept sets and included/mapped concepts from a cohort definition

**Usage**

```
getConceptSetsAndConceptsFromCohort(baseUrl, definitionId,  
    vocabSourceKey = NULL)
```

**Arguments**

|                |   |
|----------------|---|
| baseUrl        | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| definitionId   | The cohort id to fetch concept sets and concepts from                             |
| vocabSourceKey | The vocabulary key to use.  |

**Details**

For a given cohort definition id, get all concept sets and resolve all concepts into an included concepts data frame and mapped concepts data frame from each

**Value**

A list of concept sets, set names, and concept data frames

**Examples**

```
## Not run:  
# This will obtain a list of concept sets and concepts from a cohort id:  
  
getConceptsFromCohortId(baseUrl = "http://server.org:80/WebAPI", definitionId = 123)  
  
## End(Not run)
```

---

|                     |                                      |
|---------------------|--------------------------------------|
| getPriorityVocabKey | <i>Get Priority Vocab Source Key</i> |
|---------------------|--------------------------------------|

---

**Description**

Get Priority Vocab Source Key

**Usage**

```
getPriorityVocabKey(baseUrl)
```

**Arguments**

|         |   |
|---------|---|
| baseUrl | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
|---------|---|

**Details**

Obtains the source key of the default OMOP Vocab in Atlas.

**Value**

A string with the source key of the default OMOP Vocab in Atlas.

---

|                            |   |
|----------------------------|---|
| getSetExpressionConceptIds | <i>Get Concepts from a Concept Set Expression</i> |
|----------------------------|---|

---

**Description**

Get Concepts from a Concept Set Expression

**Usage**

```
getSetExpressionConceptIds(baseUrl, expression, vocabSourceKey = NULL)
```

**Arguments**

|                |   |
|----------------|---|
| baseUrl        | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| expression     | A JSON string that represents the concept set expression                          |
| vocabSourceKey | The source key of the Vocabulary. By default, the priority Vocabulary is used.    |

**Value**

A list of concept ids





**Arguments**

|                       |  |
|-----------------------|--|
| fileName              | Name of a CSV file specifying the cohorts to insert. See details for the expected file format.   |
| baseUrl               | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".  |
| jsonFolder            | Path to the folder where the JSON representations will be saved.   |
| sqlFolder             | Path to the folder where the SQL representations will be saved.  |
| rFileName             | Name of R file to generate when insertCohortCreationR = TRUE.  |
| insertTableSql        | Should the SQL for creating the cohort table be inserted into the package as well? This file will be called CreateCohortTable.sql.   |
| insertCohortCreationR | Insert R code that will create the cohort table and instantiate the cohorts? This will create a file called R/CreateCohorts.R containing a function called .createCohorts. |
| generateStats         | Should cohort inclusion rule statistics be created?  |
| packageName           | The name of the package (only needed when inserting the R code as well).   |

**Details**

The CSV file should have at least the following fields:

**atlasId** The cohort ID in ATLAS.

**cohortId** The cohort ID that will be used when instantiating the cohort (can be different from atlasId).

**name** The name to be used for the cohort. This name will be used to generate file names, so please use letters and numbers only (no spaces).

---

```
insertConceptSetConceptIdsInPackage
```

*Insert a set of concept sets' concept ids into package*

---

**Description**

Insert a set of concept sets' concept ids into package

**Usage**

```
insertConceptSetConceptIdsInPackage(fileName, baseUrl)
```

**Arguments**

|          |  |
|----------|--|
| fileName | Name of a CSV file in the inst/settings folder of the package specifying the concept sets to insert. See details for the expected file format. |
| baseUrl  | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI".  |

**Details**

The CSV file should have:

**atlasId** The concept set Id in ATLAS.

---

`invokeCohortSetGeneration`*Invoke the generation of a set of cohort definitions*

---

**Description**

Invoke the generation of a set of cohort definitions

**Usage**

```
invokeCohortSetGeneration(baseUrl, sourceKeys, definitionIds)
```

**Arguments**

|                            |   |
|----------------------------|---|
| <code>baseUrl</code>       | The base URL for the WebApi instance, for example: "http://server.org:80/WebAPI". |
| <code>sourceKeys</code>    | A list of CDM source keys. These can be found in Atlas -> Configure.              |
| <code>definitionIds</code> | A list of cohort definition Ids   |

**Details**

Invokes the generation of a set of cohort definitions across a set of CDMs set up in WebAPI. Use `getCohortGenerationStatuses` to check the progress of the set.

---

`ROhdsiWebApi`*ROhdsiWebApi*

---

**Description**

ROhdsiWebApi

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