

# Package ‘Rexperigen’

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**Title** R Interface to Experigen

**Version** 0.2.1

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**Description** Provides convenience functions to communicate with an Experigen server: Experigen (<<http://github.com/aquincum/experigen>>) is an online framework for creating linguistic experiments, and it stores the results on a dedicated server. This package can be used to retrieve the results from the server, and it is especially helpful with registered experiments, as authentication with the server has to happen.

**Depends** R (>= 3.2.3)

**License** GPL-3

**URL** <https://github.com/aquincum/Rexperigen>

**LazyData** true

**Imports** RCurl, digest, jsonlite

**Suggests** testthat

**RoxygenNote** 5.0.1

**NeedsCompilation** yes

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|             |                                 |
|-------------|---------------------------------|
| API.request | <i>Run a request to the API</i> |
|-------------|---------------------------------|

---

**Description**

Run a request to the API

**Usage**

```
API.request(server = getOption("Rexperigen.server"), request = "version",  
  params = list(), auth = FALSE, method = "GET")
```

**Arguments**

- server           The server name (no need to be clean)
- request         The request verb to the server
- params          A list of name=value pairs that will be passed to the server
- auth            Do we send authentication? If this is FALSE, we don't.
- method          The HTTP method to use (GET | POST | PUT | DELETE).

**See Also**

Other development: [checkAuthentication](#), [create.API.request.URL](#), [prepare.server.URL](#), [server.version](#)

---

|                     |                                                                                                                    |
|---------------------|--------------------------------------------------------------------------------------------------------------------|
| checkAuthentication | <i>Checks whether the authentication is supported by the server and handles the different POST request routes.</i> |
|---------------------|--------------------------------------------------------------------------------------------------------------------|

---

## Description

Checks whether the authentication is supported by the server and handles the different POST request routes.

## Usage

```
checkAuthentication(request, auth, version.needed = 1)
```

## Arguments

|                |                                                                                                                            |
|----------------|----------------------------------------------------------------------------------------------------------------------------|
| request        | The needed request to be made (without .cgi).                                                                              |
| auth           | Whether authentication is requested in R.                                                                                  |
| version.needed | The minimum version of the request. If it is 1, and the server is version 1, the function will append .cgi to the request. |

## Value

A list:

1. request: the request to send
2. auth: whether to still send an authenticated request.

## See Also

Other development: [API.request](#), [create.API.request.URL](#), [prepare.server.URL](#), [server.version](#)

## Examples

```
checkAuthentication("makecsv", TRUE)
checkAuthentication("registration", TRUE, 2)
```

---

`checkLogin`*Checks whether the user is logged in.*

---

**Description**

Checks whether the user is logged in. It also throws an exception if the server is of an old version and logging in is not supported.

**Usage**

```
checkLogin()
```

**Value**

The experimenter login user name

**Examples**

```
options(Rexperigen.server.version="2.0.0")
setExperigenCredentials("my", "credentials", check = FALSE)
checkLogin()
```

---

`cleanURL`*Returns the cleaned source URL.*

---

**Description**

Experigen has been using some URL cleaning since version 1. This function asks the server (if version  $\geq 2$ ) to return how it would clean the given URL. For older versions, you still have to replace /'s and stuff by .'s by yourself, sorry!

**Usage**

```
cleanURL(sourceURL)
```

**Arguments**

`sourceURL`      The source URL to clean

**Value**

The cleaned URL

## Examples

```
## Not run:  
cleanURL("https://s3.amazonaws.com/myexperiment/index.html")  
  
## End(Not run)
```

---

```
create.API.request.URL
```

*Create an URL for a request to the Experigen API.*

---

## Description

Create an URL for a request to the Experigen API.

## Usage

```
create.API.request.URL(server, request, params = list())
```

## Arguments

|         |                                                              |
|---------|--------------------------------------------------------------|
| server  | The server name (no need to be clean)                        |
| request | The request verb to the server                               |
| params  | A list of name=value pairs that will be passed to the server |

## Value

A URL that can be queried.

## See Also

Other development: [API.request](#), [checkAuthentication](#), [prepare.server.URL](#), [server.version](#)

## Examples

```
create.API.request.URL("db.phonologist.org", "users", list(sourceurl="x.y", experimentName="z"))
```

---

|                    |                                                 |
|--------------------|-------------------------------------------------|
| createExperimenter | Create a login for yourself using this function |
|--------------------|-------------------------------------------------|

---

**Description**

Create a login for yourself using this function

**Usage**

```
createExperimenter(experimenter, password)
```

**Arguments**

|              |                |
|--------------|----------------|
| experimenter | The username.  |
| password     | Your password. |

**Value**

A string that the server returns ("done" if success)

---

|                    |                                           |
|--------------------|-------------------------------------------|
| downloadExperiment | Makes a download request from the server. |
|--------------------|-------------------------------------------|

---

**Description**

This function downloads the results of an experiment.

**Usage**

```
downloadExperiment(sourceURL, experimentName, destination = "default.csv",  
  auth = FALSE)
```

**Arguments**

|                |                                                                                                                         |
|----------------|-------------------------------------------------------------------------------------------------------------------------|
| sourceURL      | The source URL for the experiment                                                                                       |
| experimentName | The experiment name as set in settings.js                                                                               |
| destination    | The file to download. By default, all uploaded results are saved in default.csv, which is the default file to download. |
| auth           | Whether authentication is needed                                                                                        |

**Value**

The downloaded data set as data frame

**See Also**

Other download: [getDestinations](#), [getUsers](#)

**Examples**

```
## Not run:
downloadExperiment("https...s3.amazonaws.com.myexperiment.index.html", "testing1")
downloadExperiment("https...s3.amazonaws.com.myexperiment.index.html", "running", auth = TRUE)

## End(Not run)
```

---

|                 |                                                          |
|-----------------|----------------------------------------------------------|
| getDestinations | Returns the list of destination files for an experiment. |
|-----------------|----------------------------------------------------------|

---

**Description**

Returns the list of destination files for an experiment.

**Usage**

```
getDestinations(sourceURL, experimentName, auth = FALSE)
```

**Arguments**

|                |                                           |
|----------------|-------------------------------------------|
| sourceURL      | The source URL for the experiment         |
| experimentName | The experiment name as set in settings.js |
| auth           | Whether authentication is needed          |

**Value**

The list of destinations

**See Also**

Other download: [downloadExperiment](#), [getUsers](#)

**Examples**

```
## Not run:
getDestinations("https...s3.amazonaws.com.myexperiment.index.html", "running", auth = TRUE)

## End(Not run)
```

getRegisteredExperiments

*Get a list of registered experiments.*

---

### Description

Returns a list of the registered experiments for the logged in experimenter.

### Usage

```
getRegisteredExperiments()
```

### Value

The parsed list of experiments

### See Also

Other registration: [registerExperiment](#), [removeRegistration](#)

### Examples

```
## Not run:  
getRegisteredExperiments()  
  
## End(Not run)
```

---

getUsers

*Requests the table of users from the server.*

---

### Description

Requests the table of users from the server.

### Usage

```
getUsers(sourceURL, experimentName, auth = FALSE)
```

### Arguments

|                |                                           |
|----------------|-------------------------------------------|
| sourceURL      | The source URL for the experiment         |
| experimentName | The experiment name as set in settings.js |
| auth           | Whether authentication is needed          |

**Value**

The table of users

**See Also**

Other download: [downloadExperiment](#), [getDestinations](#)

**Examples**

```
## Not run:  
getUsers("https...s3.amazonaws.com.myexperiment.index.html", "running", auth = TRUE)  
  
## End(Not run)
```

---

|                 |                                                                                              |
|-----------------|----------------------------------------------------------------------------------------------|
| logoutExperigen | <i>Simply removes the stored credentials, so following requests will be unauthenticated.</i> |
|-----------------|----------------------------------------------------------------------------------------------|

---

**Description**

Simply removes the stored credentials, so following requests will be unauthenticated.

**Usage**

```
logoutExperigen()
```

---

|                 |                                                      |
|-----------------|------------------------------------------------------|
| NO_SERVER_ERROR | <i>Error string returned when no server is found</i> |
|-----------------|------------------------------------------------------|

---

**Description**

Error string returned when no server is found

**Usage**

```
NO_SERVER_ERROR
```

**Format**

An object of class character of length 1.

---

|                    |                                |
|--------------------|--------------------------------|
| prepare.server.URL | <i>Server URL preparation.</i> |
|--------------------|--------------------------------|

---

**Description**

Prepares the server URL by checking for the presence of a protocol prefix, and prefixing `http://` if there is none. Also, returns the URL with a trailing `/` if that was not present either.

**Usage**

```
prepare.server.URL(server)
```

**Arguments**

|        |                |
|--------|----------------|
| server | A server name. |
|--------|----------------|

**Value**

A clean URL with protocol prefix and trailing slash.

**See Also**

Other development: [API.request](#), [checkAuthentication](#), [create.API.request.URL](#), [server.version](#)

**Examples**

```
prepare.server.URL("db.phonologist.org")
prepare.server.URL("https://myserver.com/")
```

---

|                    |                                                     |
|--------------------|-----------------------------------------------------|
| registerExperiment | <i>Registers an experiment to the experimenter.</i> |
|--------------------|-----------------------------------------------------|

---

**Description**

Registers the given experiment to the experimenter. Returns the server's response. Do provide the credentials before calling this function

**Usage**

```
registerExperiment(sourceURL, experimentName)
```

**Arguments**

|                |                                           |
|----------------|-------------------------------------------|
| sourceURL      | The source URL for the experiment         |
| experimentName | The experiment name as set in settings.js |

**Value**

The server response.

**See Also**

Other registration: [getRegisteredExperiments](#), [removeRegistration](#)

**Examples**

```
## Not run:  
registerExperiment("https...s3.amazonaws.com.myexperiment.index.html", "running")  
  
## End(Not run)
```

---

|                    |                                                   |
|--------------------|---------------------------------------------------|
| removeRegistration | <i>Removes the registration of the experiment</i> |
|--------------------|---------------------------------------------------|

---

**Description**

Removes the registration of the experiment to the logged in experimenter. Does not remove any data though! All of the data will be available to anyone.

**Usage**

```
removeRegistration(sourceURL, experimentName)
```

**Arguments**

|                |                                           |
|----------------|-------------------------------------------|
| sourceURL      | The source URL for the experiment         |
| experimentName | The experiment name as set in settings.js |

**Value**

The server response.

**See Also**

Other registration: [getRegisteredExperiments](#), [registerExperiment](#)

**Examples**

```
## Not run:  
removeRegistration("https...s3.amazonaws.com.myexperiment.index.html", "running")  
  
## End(Not run)
```

---

Rexperigen

*Rexperigen: an R interface to Experigen*


---

### Description

An R interface for downloading results from an Experigen server. Works with the "classic" server that is currently running on `db.experigen.org` as well, but its main advantage is that it helps a lot with the new functions of the newer version of the Experigen server. Most importantly, it helps with registration of experimenters, registration of experiments and accessing their data.

### Setup functions

`setExperigenServer`, `setExperigenCredentials`

### Registration functions

`registerExperiment`, `removeRegistration`, `getRegisteredExperiments`

### Download functions

The main function is `downloadExperiment`. Further information about the experiment can be inquired with `getUsers` and `getDestinations`

---

`server.version`
*Returns the version of an Experigen server*


---

### Description

Returns the version of an Experigen server

### Usage

```
server.version(server = getOption("Rexperigen.server"))
```

### Arguments

`server`                      The server name

### Value

A string with the Experigen server version

### See Also

Other development: `API.request`, `checkAuthentication`, `create.API.request.URL`, `prepare.server.URL`

## Examples

```
server.version("db.phonologist.org")
```

---

```
setExperigenCredentials
```

*Sets up the experimenter credentials for the further requests. It can also check whether the authentication is successful.*

---

## Description

Sets up the experimenter credentials for the further requests. It can also check whether the authentication is successful.

## Usage

```
setExperigenCredentials(experimenter, password, check = TRUE, quiet = FALSE)
```

## Arguments

|              |                                                                            |
|--------------|----------------------------------------------------------------------------|
| experimenter | The experimenter username                                                  |
| password     | The password for the experimenter                                          |
| check        | Whether to check if the experimenter is registered.                        |
| quiet        | If TRUE, the function will not print out the result of the existence check |

## Value

Whether the existence check is successful. If check = FALSE, it will return TRUE by default

## See Also

Other setup: [setExperigenServer](#)

## Examples

```
## Not run:  
setExperigenCredentials("joesmith", "1234")  
  
## End(Not run)  
setExperigenCredentials("janemiller", "passdrow", check = FALSE)
```

---

|                    |                                                                                                                                                                                                                                                      |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| setExperigenServer | <i>Sets the Experigen server address for further operations. By default, it checks the existence of the server and sets the Rexperigen.server.version option based on the response of the server. If check = FALSE, set the version by yourself!</i> |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

---

### Description

Sets the Experigen server address for further operations. By default, it checks the existence of the server and sets the Rexperigen.server.version option based on the response of the server. If check = FALSE, set the version by yourself!

### Usage

```
setExperigenServer(server, check = TRUE)
```

### Arguments

|        |                                         |
|--------|-----------------------------------------|
| server | The server's URL                        |
| check  | Whether to check the server's existence |

### See Also

Other setup: [setExperigenCredentials](#)

### Examples

```
setExperigenServer("db.phonologist.org")
setExperigenServer("localhost:3000", FALSE)
```

---

|             |                                                       |
|-------------|-------------------------------------------------------|
| versionMain | <i>Returns the main version number of the server.</i> |
|-------------|-------------------------------------------------------|

---

### Description

Returns the main version number of the server.

### Usage

```
versionMain()
```

### Value

The main version number as a numeric

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