



## Overview of the `ecomSUDG.Raccess` package

Since the [?R language](#) has been adopted for some key tasks in the EUPORIAS and SPECS projects (including the development of comprehensive validation and statistical-downscaling packages), the `ecomSUDG.Raccess` is envisaged as a user-friendly, R-based interface to the ECOMS User Data Gateway, enabling [authentication?](#) and remote access to the different datasets (seasonal forecasting, observations, reanalysis) currently available. Moreover, `ecomSUDG.Raccess` implements data homogenization (a single vocabulary) and time filtering/aggregation functionality.

The `ecomSUDG.Raccess` package relies on the `rJava` package as an interface to the powerful capabilities of the [?Unidata's netCDF Java library](#).

- [Pre-requisites](#)
- [Authentication?](#)
- [Data Homogeneization?](#)
- [Examples?](#)

## Versions

The latest versions (stable and/or devel) can be installed directly from [?github](#), but please note that the R package [?devtools](#) must be installed.

### Latest stable release 2.2-4 (25 Aug 2014)

[?see what's new](#)

[User's manual?](#)

To obtain the latest stable release of the `ecomSUDG.Raccess` package (and the associated dependencies), type the following commands from your R console:

```
devtools::install_github(c("SantanderMetGroup/downscaleR.java@stable",
"downscaleR/downscaleR@stable",
"downscaleR/ecomSUDG.Raccess@stable"))
```

If attempting the installation from a proxy server and getting an error, please [?try this](#).

## Older versions

### version 2.2-3 (18 Aug 2014)

- Bug fix for 1-dimensional output data queries (i.e. time series at single point locations, without members)

### version 2.2-2 (18 Aug 2014)

- New global attributes in output (thanks to Stefan Siegert for this suggestion):
  - `dataset`: Name of the dataset returned (e.g. "System4\_seasonal\_15", "NCEP", etc.)
  - `source`
  - `URL`
- Consistent ordering of array dimensions: The output n-dimensional array now preserves the canonical ordering of its dimensions: (member, time, level, lat, lon) (thanks to Stefan Siegert for this suggestion)
- New daily aggregation options: minimum and maximum daily data are now returned when using the `time = "DD"` option for the relevant variables (e.g. "tasmin", "tasmax" ...).

### version 2.2-1 (05 Aug 2014)

- Minor enhancements:
  - Improved on screen error messages with clearer instructions for error fixing
  - The 'runtime' dimension in CFSv2 output data array has been changed to 'member' for better integration with `downscaleR::plotMeanField`

**version 2.2-0** (16 Jul 2014)

- New dependency on R Package downscaleR with inherited features such as:
  - Plotting mean fields
  - Fast Multi-member Interpolation/re-gridding capabilities
  - Many more coming in the next major downscaleR release (bias correction, perfect-prog downscaling methods...)
- HTTP Java authenticator on-screen messages have been suppressed: Only user-relevant information is now displayed
- Automatically checks and warns the user about new available versions on attach
- Other minor bug fixes and improvements

**version 2.1-1** (11 Jul 2014)

- Bug fix accessing surface air temperature and derived variables in System4 with mean daily temporal aggregation (thanks to Maria Dolores Frías for pointing to the error)

**version 2.1-0** (8 Jul 2014)

- New extended list of available variables
- NCEP reanalysis included in available datasets
- On-the-fly computation of derived variables
- Support for variables with vertical levels and static (e.g. geopotential surface zs)
- New dependency on downscaleR.java R package containing Java dependencies

**version 2.0-0** (16-jun-2014).

- New input/output format
  - Access to a extended list of surface variables
  - New observational gridded dataset WFDEI
  - On-the-fly time filtering/aggregation capabilities
- **version 1.0-0** (17-feb-2014). Access to a limited list of surface variables for System4 and CFSv2 datasets.

**Development version**

The development version is available at the 'master' branch of the [??github repository](#), but please note that **the development version is unstable and may not be functional**

```
devtools::install_github(c("SantanderMetGroup/downscaleR.java@stable",
"    SantanderMetGroup/downscaleR@stable",
"    SantanderMetGroup/ecomsUDG.Raccess"))
```