[s2dverification](#)

Installation

s2dverification has a system dependency, the CDO libraries, for interpolation of grid data and retrieval of metadata. Make sure you have these libraries installed in the system or download and install from https://code.zmaw.de/projects/cdo.

You can then install the publicly released version of s2dverification from CRAN:
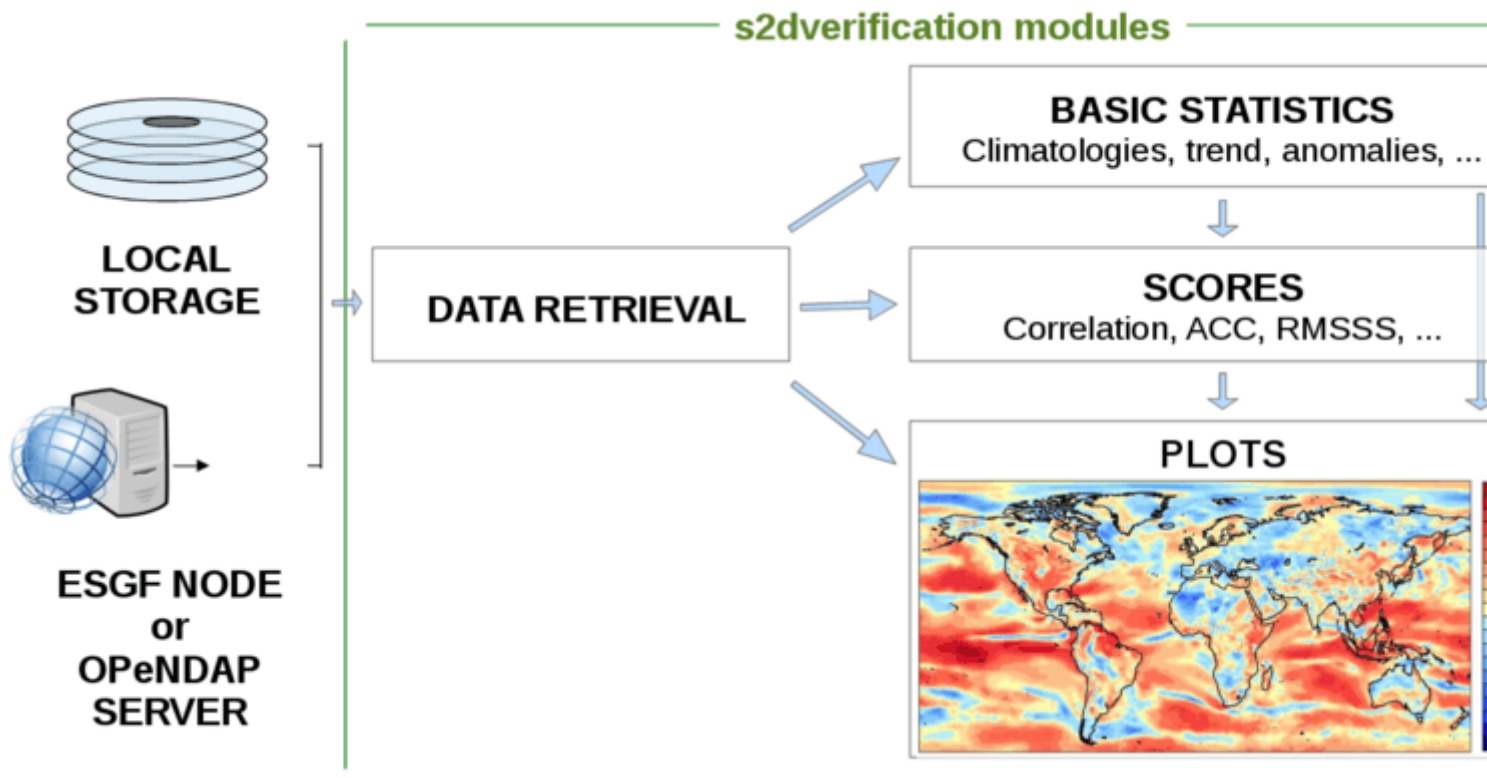
```
install.packages ("s2dverification")
```

Or the development version from the GitLab repository:

```
# install.packages("devtools")
devtools::install_git("https://earth.bsc.es/gitlab/es/s2dverification.git"
```

Overview

The following diagram depicts the modules of s2dverification and how they interact:

The **Data retrieval** module allows you to gather and homogenize NetCDF data files stored in a local or remote file system. Some simple previous steps are required, however, to set up some configuration parameters so that the module can locate the source files and recognize the variables of interest.

Once the data has been loaded into an R object, **Basic statistics** can be computed, such as climatologies, trends, bias correction, smoothing, ...

Either after computing basic statistics or directly from the original data, the functions in the **Verification** module allow you to compute deterministic and probabilistic scores and skill scores, such as root mean square error, time or spatial correlation or brier score.

Visualisation functions are also provided to plot the results obtained from any of the modules above.

If it's your first time using s2dverification you can check an **Example** of use spanning its four modules or review the **Tutorials** section. You will find more detailed examples in the documentation page of each module.

You can also check the examples of usage of each function after attaching the package as follows:

```
ls('package:s2dverification')
##  [1] "ACC"                      "Alpha"
##  [3] "Ano"                      "Ano_CrossValid"
##  [5] "Clim"                     "ColorBar"
##  [7] "ConfigAddEntry"           "ConfigApplyMatchingEntries"
##  [9] "ConfigEditDefinition"     "ConfigEditEntry"
## [11] "ConfigFileCreate"         "ConfigFileOpen"
## [13] "ConfigFileSave"           "ConfigRemoveDefinition"
## [15] "ConfigRemoveEntry"        "ConfigShowDefinitions"
## [17] "ConfigShowSimilarEntries" "ConfigShowTable"
## [19] "Consist_Trend"            "Corr"
## [21] "CRPS"                     "Enlarge"
## [23] "Eno"                      "EnoNew"
## [25] "Filter"                   "FitAcfCoef"
## [27] "FitAutocor"               "GenSeries"
## [29] "Histo2Hindcast"           "IniListDims"
## [31] "InsertDim"                "LeapYear"
## [33] "Load"                     "Mean1Dim"
## [35] "MeanListDim"              "Plot2VarsVsLTime"
## [37] "PlotACC"                  "PlotAno"
## [39] "PlotClim"                 "PlotEquiMap"
## [41] "PlotSection"              "PlotStereoMap"
## [43] "PlotVsLTime"              "ProbBins"
## [45] "RatioRMS"                 "RatioSDRMS"
## [47] "Regression"               "RMS"
## [49] "RMSSS"                    "sampleDepthData"
## [51] "sampleMap"                "sampleTimeSeries"
## [53] "Season"                   "SelIndices"
## [55] "Smoothing"                "Spectrum"
## [57] "Spread"                   "Trend"


    ?FunctionName
```

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