Techila with R

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Introduction of the R peach syntax

- **Simple interface for creating Projects**
- **Typically the R peach syntax will define:**
  - The name of the function that will be called
  - The name of the R-script that will be sourced on the Worker
  - Input arguments for the executable function
  - Files that will be transferred to the participating Workers
  - Number of Jobs
  - Location of the gmk directory

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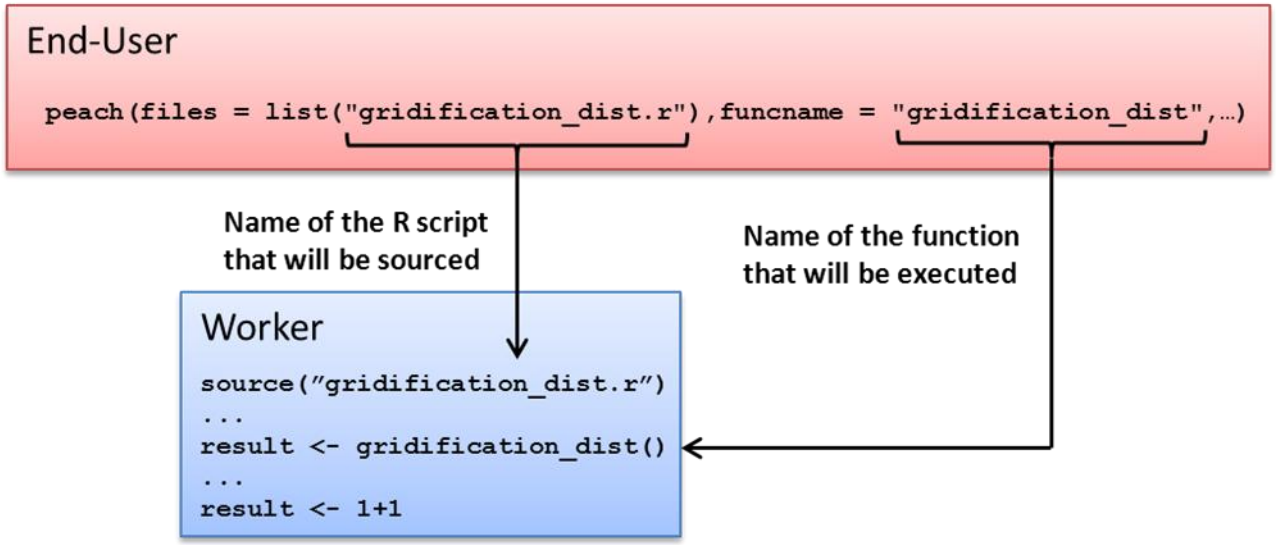

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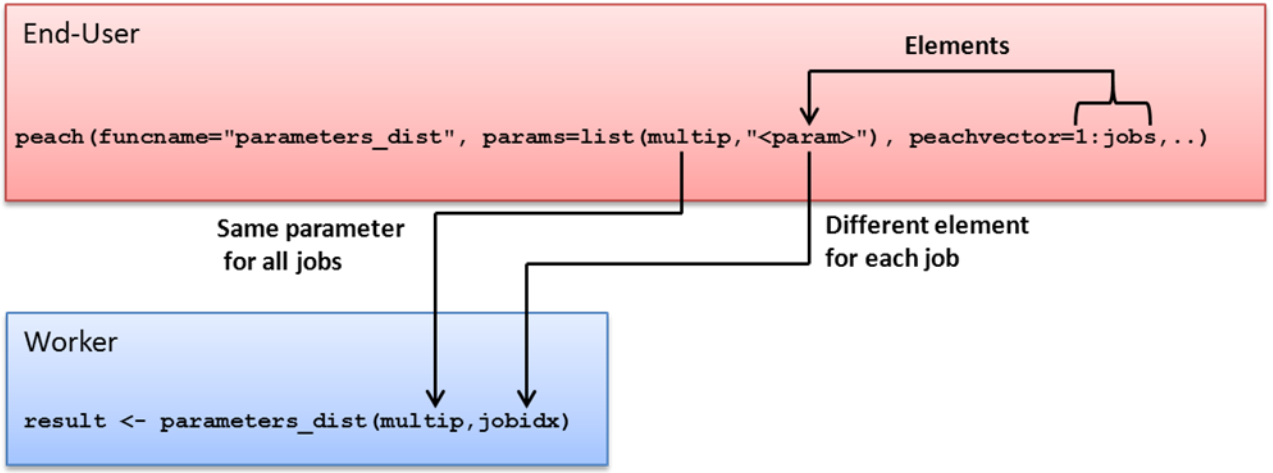

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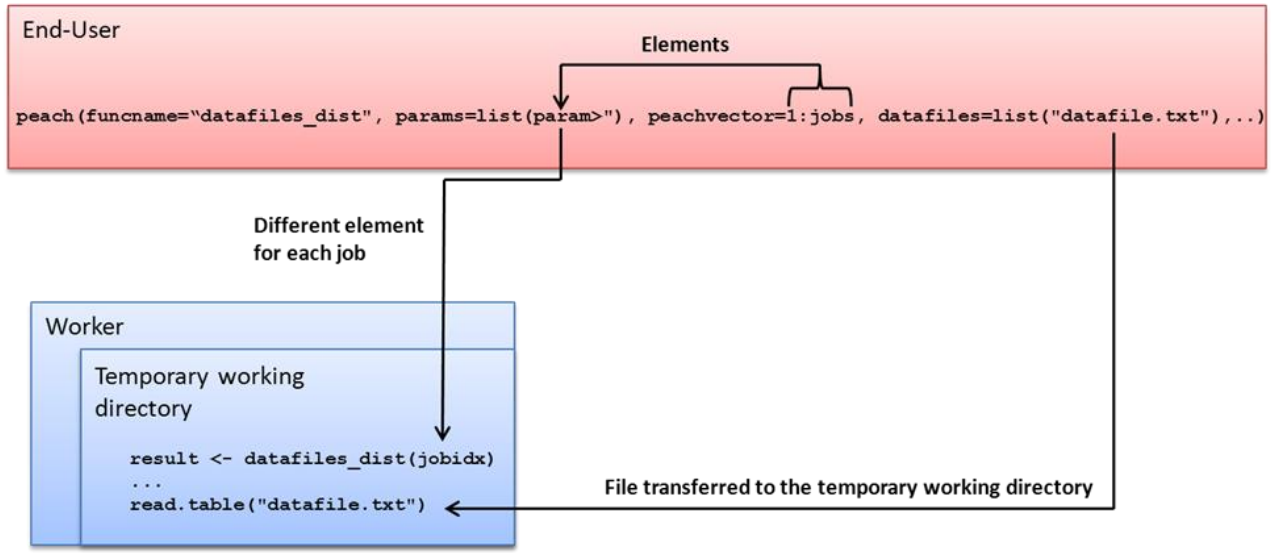


Introduction of the R peach syntax

- **Example of a complete R peach syntax:**

```
peach(funcname="functionName",                # Function executed on Workers
      files=list("exampleSript.R"),           # Script sourced on Workers
      params=list("<param>",parameter=10),# Input arguments
      datafiles=list("datafile.txt"),         # File transferred to Workers
      peachvector=1:10,                       # Number of Jobs set to 10
      gmkroot="../../../..")                  # Path of the 'gmk' directory
```

Introduction of the R peach syntax

- **Peach features can be enabled by adding more parameters:**

```
peach(funcname="functionName",                # Function executed on Workers
      files=list("exampleSript.R"),           # Script sourced on Workers
      params=list("<param>",parameter=10),    # Input arguments
      datafiles=list("datafile.txt"),         # File transferred to Workers
      peachvector=1:10,                       # Number of Jobs set to 10
      gmkroot="../../../..",                  # Path of the 'gmk' directory
      Rversion="2101",                        # Runtime Bundle version
      stream = TRUE,                          # Enable streaming
      callback="cbFun")                       # Execute 'cbFun' once for
                                              # each result.
```

Preparation

- **Accessing the peach interface requires two R packages**
  - rJava (available in repositories)
  - techila (included in the Techila Grid Management Kit)
- **Installing rJava package**
  1. Launch R
  2. Install from R with the following command:

     ```
     install.packages("rJava")
     ```
- **Installing techila package**
  1. Change your directory in R to ”<full path>/gmk/grid/R”
  2. Install with command:

     ```
     install.packages("techila",repos=NULL,type="source")
     ```

Creating a test Project

1. **Change your current working directory in R to:**

   <full path>/gmk/examples/R/Tutorial/1_gridification

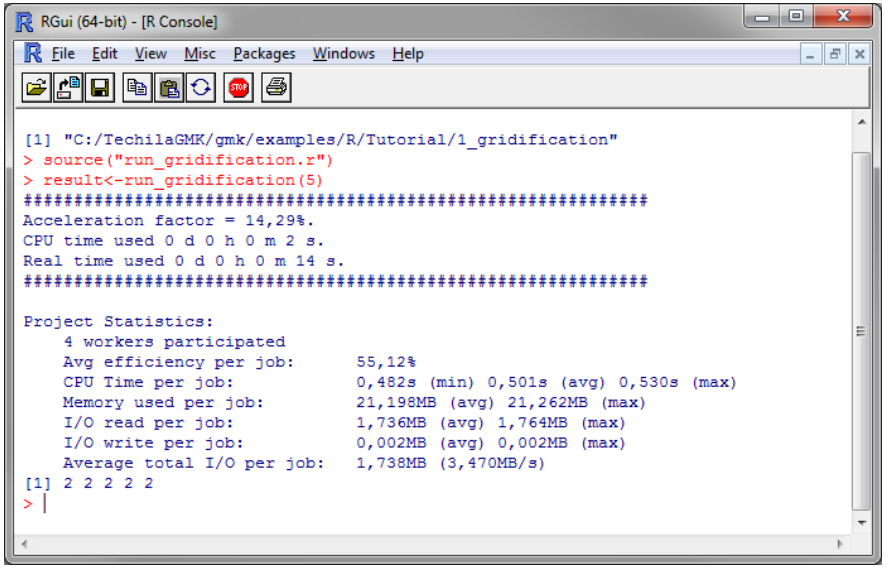
2. **Source the run_gridification.r script:**

   ```
   source("run_gridification.r")
   ```

3. **Create the test Project:**

   ```
   result <- run_gridification(5)
   ```

4. **When prompted, enter your password**



5. **A status bar will be displayed containing Project information**

Requests on what features to demonstrate

- **Techila Grid Management Kit contains examples of:**
  - Streaming & Callback
  - Job Input Files
  - How to include your own libraries
  - Managing result files with the filehandler
  - Iterative Projects
  - And more...

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