

# Package ‘ROI.plugin.neos’

August 29, 2020

**Version** 1.0-0

**Title** 'NEOS' Plug-in for the 'R' Optimization Interface

**Description** Enhances the 'R' Optimization Infrastructure ('ROI') package with a connection to the 'neos' server. 'ROI' optimization problems can be directly be sent to the 'neos' server and solution obtained in the typical 'ROI' style.

**Imports** stats, methods, utils, ROI (>= 0.3-0), xmlrpc2, xml2

**Suggests** slam

**License** GPL-3

**URL** <http://roi.r-forge.r-project.org/>,  
<https://r-forge.r-project.org/projects/roi/>

**NeedsCompilation** no

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**Repository** CRAN

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control	<i>Control Variables</i>
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**Description**

The control variables for `ROI.plugin.neos`.

**Arguments**

<code>user</code>	a character string giving the username.
<code>email</code>	a character string giving the email address.
<code>dry_run</code>	a logical if TRUE <b>ROI</b> returns the solver call.
<code>wait</code>	a logical indicating whether the R interpreter should wait for the command to finish, or run it asynchronously. If TRUE <b>ROI</b> returns an object of class "neos_job".

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Example-1	<i>Linear Problem 1</i>
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**Description**

$$\text{maximize } 2x_1 + 4x_2 + 3x_3$$

*subject to :*

$$3x_1 + 4x_2 + 2x_3 \leq 60$$

$$2x_1 + x_2 + 2x_3 \leq 40$$

$$x_1 + 3x_2 + 2x_3 \leq 80$$

$$x_1, x_2, x_3 \geq 0$$

**Examples**

```
## Not run:
library(ROI)
mat <- matrix(c(3, 4, 2,
               2, 1, 2,
               1, 3, 2), nrow=3, byrow=TRUE)
x <- OP(objective = c(2, 4, 3),
        constraints = L_constraint(L = mat,
                                  dir = c("<=", "<=", "<="),
                                  rhs = c(60, 40, 80)),
        maximum = TRUE)
```

```
opt <- ROI_solve(x, solver = "neos", method = "scip")
opt
## Optimal solution found.
## The objective value is: 7.666667e+01
solution(opt)
## [1] 0.000000 6.666667 16.666667

## End(Not run)
```

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