

Package: ROI.plugin.highs (via r-universe)

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Version 1.0-3

Title 'HiGHS' Plugin for the 'R' Optimization Infrastructure

Description Enhances the 'R' Optimization Infrastructure ('ROI') package with the quadratic solver 'HiGHS'. More information about 'HiGHS' can be found at <https://highs.dev>.

Imports methods, ROI (>= 1.0-0), highs

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NeedsCompilation no

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Config/pak/sysreqs cmake pkg-config

Repository <https://schweiflo.r-universe.dev>

RemoteUrl <https://github.com/cran/ROI.plugin.highs>

RemoteRef HEAD

RemoteSha b68c373ad07886e75a43bb4770180809ee4c6bce

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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

```

Sys.setenv(ROI_LOAD_PLUGINS = FALSE)
library("ROI")
library("ROI.plugin.highs")
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 = "highs")
opt
## Optimal solution found.
## The objective value is: 7.666667e+01
solution(opt)
## [1] 0.000000 6.666667 16.666667

```

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