

NEOS and rneos package

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Network-Enabled Optimization System (NEOS): might be the latest greatest group of optimization procedures.

- NEOS website: <http://www.neos-server.org/neos/>
- server framework for solving optimization problems.

Why using NEOS?

- Optimization software does not need to be installed locally.
- Computational burdensome problems are transferred to remote machines.

NEOS optimization problems

NEOS Interfaces

1. Through Internet: Upload of model and data files
2. Through Email: Upload of model and data files
3. AMPL/ GAMS via Kestrel
4. NEOS API (XML-RPC): available clients, like R

R package rneos

- Classes: NeosComm, NeosXml, NeosJob, NeosAns
- Functions: API: NemailHelp(), NgetFinalResults(), NgetFinalResultsNonBlocking(), NgetIntermediateResults(), NgetIntermediateResultsNonBlocking(), NgetJobInfo(), NgetJobStatus(), NgetSolverTemplate(), Nhelp(), NkillJob(), NlistAllSolvers(), NlistCategories(), NlistSolversInCategory(), Nping(), NprintQueue(), NsubmitJob(), Nversion(), Nwelcome()
- Utility: CreateNeosComm(), CreateXmlString()
- Methods: show, update

r example [rneos_example.R](#)

reference: <http://www.rinfinance.com/agenda/2011/BernhardPfaff.pdf>

<http://www.gams.com/finlib/libhtml/TwoStageStochastic.gms>

<http://cran.r-project.org/web/packages/rneos/rneos.pdf>