NAME

CUTEST_cdimchp – CUTEst tool to determine the number of nonzeros needed to store the products of the Hessian matrices of the constraint functions with a specified vector for the problem decoded from a SIF file by the script *sifdecoder*.

SYNOPSIS

CALL CUTEST_cdimchp(status, nnzchp)

DESCRIPTION

The CUTEST_cdimchp subroutine determines the number of nonzero elements required to store the products of the Hessian matrices of the constraint functions with a specified vector for the problem decoded into OUTSDIF.d in the constrained minimization case.

The problem under consideration is to minimize or maximize an objective function $f(x)$ over all $x \in R^n$ subject to general equations $c_i(x) = 0$, $(i \in 1, \ldots, m_E)$, general inequalities $c_i^l(x) \le c_i(x) \le c_i^u(x)$, $(i \in m_E + 1, \ldots, m)$, and simple bounds $x^l \le x \le x^u$. The objective function is group-partially separable and all constraint functions are partially separable.

ARGUMENTS

The arguments of CUTEST_cdimchp are as follows:

status [out] - integer

the outputr status: 0 for a succesful call, 1 for an array allocation/deallocation error, 2 for an array bound error, 3 for an evaluation error,

nnzchp [out] - integer

the total number of nonzero entries required to store the products of the constraint Hessians with a vector.

AUTHORS

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SEE ALSO

CUTEst: a Constrained and Unconstrained Testing Environment with safe threads for mathematical optimization,
  N.I.M. Gould, D. Orban and Ph.L. Toint,
  Computational Optimization and Applications **60**:3, pp.545-557, 2014.

CUTEr (and SifDec): A Constrained and Unconstrained Testing Environment, revisited,
  N.I.M. Gould, D. Orban and Ph.L. Toint,
  ACM TOMS, **29**:4, pp.373-394, 2003.

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  I. Bongartz, A.R. Conn, N.I.M. Gould and Ph.L. Toint,
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sifdecoder(1).