



RESULTS

NEOS Server Version 6.0
 Job# : 12737851
 Password : heWkEuqL
 User :
 Solver : go:BARON:GAMS
 Start : 2023-02-08 15:35:08
 End : 2023-02-08 15:35:11
 Host : prod-sub-1.neos-server.org

This is the Output File with the program in file

<First_Example_Synthetic_Data_Model_D1.txt> was executed.

Comment by Dr. E. Triantaphyllou, February 8, 2023.

Disclaimer:

This information is provided without any express or implied warranty. In particular, there is no warranty of any kind concerning the fitness of this information for any particular purpose.

Announcements:

Executed on prod-exec-6.neos-server.org

GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/08/23 15:35:10 Page 1
 General Algebraic Modeling System
 Compilation

COMPILATION TIME = 0.001 SECONDS 2 MB 41.4.0 caab8bc0 LEX-LEG
 GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/08/23 15:35:10 Page 2
 General Algebraic Modeling System
 Range Statistics SOLVE First_Illustrative_Example_Section_3_1 Using NLP From line 304

RANGE STATISTICS (ABSOLUTE NON-ZERO FINITE VALUES)

RHS [min, max] : [4.000E-02, 1.000E+00] - Zero values observed as well
 Bound [min, max] : [NA, NA] - Zero values observed as well
 Matrix [min, max] : [1.000E+00, 2.000E+00] - Zero values observed as well

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 General Algebraic Modeling System
 Model Statistics SOLVE First_Illustrative_Example_Section_3_1 Using NLP From line 304

MODEL STATISTICS

BLOCKS OF EQUATIONS	54	SINGLE EQUATIONS	54
BLOCKS OF VARIABLES	60	SINGLE VARIABLES	60
NON ZERO ELEMENTS	207	NON LINEAR N-Z	96
CODE LENGTH	318	CONSTANT POOL	16

GENERATION TIME = 0.002 SECONDS 3 MB 41.4.0 caab8bc0 LEX-LEG
 GAMS 41.4.0 caab8bc0 Dec 14, 2022 LEX-LEG x86 64bit/Linux - 02/08/23 15:35:10 Page 4
 General Algebraic Modeling System
 Solution Report SOLVE First_Illustrative_Example_Section_3_1 Using NLP From line 304

S O L V E S U M M A R Y

MODEL	First_Illustrative_Example_Section_3_1	OBJECTIVE	Z
TYPE	NLP	DIRECTION	MINIMIZE
SOLVER	BARON	FROM LINE	304

**** SOLVER STATUS 1 Normal Completion
 **** MODEL STATUS 2 Locally Optimal
 **** OBJECTIVE VALUE 1.5007

RESOURCE USAGE, LIMIT	0.580	10000000000.000
ITERATION COUNT, LIMIT	0	2147483647
EVALUATION ERRORS	0	0

GAMS/BARON 41.4.0 caab8bc0 Dec 14, 2022 LEG x86 64bit/Linux

BARON is a product of The Optimization Firm, LLC. <http://www.minlp.com/>
 Parts of the BARON software were created at the
 University of Illinois at Urbana-Champaign.

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BARON version 22.9.30. Built: LNX-64 Fri Sep 30 09:06:37 EDT 2022

BARON is a product of The Optimization Firm.
 For information on BARON, see <https://minlp.com/about-baron>

If you use this software, please cite publications from
<https://minlp.com/baron-publications>, such as:

Khajavirad, A. and N. V. Sahinidis,
 A hybrid LP/NLP paradigm for global optimization relaxations,
 Mathematical Programming Computation, 10, 383-421, 2018.

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This BARON run may utilize the following subsolver(s)
 For LP/MIP/QP: CLP/CBC, ILOG CPLEX
 For NLP: MINOS, SNOPT, External NLP, IPOPT, FILTERSQP

Solution = 1.50070077291988 found at node 1
 Best possible = 1.50055071904
 Absolute gap = 0.000150053879883094 optca = 1E-9
 Relative gap = 9.99892067698062E-5 optcr = 0.0001

	LOWER	LEVEL	UPPER	MARGINAL
---- EQU Equation2	0.040	0.040	0.040	75.711
---- EQU Constrai~	.	6.0690E-7	+INF	1.6475E-5
---- EQU Constrai~	.	4.0976E-7	+INF	2.4399E-5
---- EQU Constrai~	.	4.4120E-7	+INF	2.2660E-5
---- EQU Constrai~	.	0.013	+INF	7.867E-10
---- EQU Constrai~	.	-9.03E-11	+INF	1.032
---- EQU Constrai~	.	-9.61E-11	+INF	2.544
---- EQU Constrai~	.	0.015	+INF	6.620E-10
---- EQU Constrai~	.	-9.72E-11	+INF	3.595
---- EQU Constrai~	.	-9.52E-11	+INF	2.083
---- EQU Constrai~	.	-8.45E-11	+INF	0.646
---- EQU Constrai~	.	-9.35E-11	+INF	1.536
---- EQU Constrai~	.	-9.65E-11	+INF	2.840
---- EQU Constrai~	.	-9.50E-11	+INF	1.992
---- EQU Constrai~	.	-9.80E-11	+INF	4.912
---- EQU Constrai~	.	-9.67E-11	+INF	3.066
---- EQU Constrai~	.	-9.80E-11	+INF	5.023
---- EQU Constrai~	.	-9.76E-11	+INF	4.217
---- EQU Constrai~	.	-9.68E-11	+INF	3.108
---- EQU Equation1	1.000	1.000	1.000	-3.028
---- EQU EQ_t1_1	.	.	.	0.824
---- EQU EQ_t1_2	.	.	.	0.817
---- EQU EQ_t1_3	.	-6.01E-14	.	0.815
---- EQU EQ_t1_4	.	.	.	0.822
---- EQU EQ_t2_1	.	.	.	0.903
---- EQU EQ_t2_2	.	.	.	1.000
---- EQU EQ_t2_3	.	.	.	1.000
---- EQU EQ_t2_4	.	.	.	1.000
---- EQU EQ_t3_1	.	.	.	0.901
---- EQU EQ_t3_2	.	.	.	1.000
---- EQU EQ_t3_3	.	.	.	1.000
---- EQU EQ_t3_4	.	.	.	1.000
---- EQU EQ_t4_1	.	.	.	1.000
---- EQU EQ_t4_2	.	.	.	1.000
---- EQU EQ_t4_3	.	.	.	1.000
---- EQU EQ_t4_4	.	.	.	1.000

----	EQU	EQ_t5_1	.	.	.	1.000
----	EQU	EQ_t5_2	.	.	.	1.000
----	EQU	EQ_t5_3	.	.	.	1.000
----	EQU	EQ_t5_4	.	.	.	1.000
----	EQU	EQ_t6_1	.	.	.	1.000
----	EQU	EQ_t6_2	.	.	.	1.000
----	EQU	EQ_t6_3	.	.	.	1.000
----	EQU	EQ_t6_4	.	.	.	1.000
----	EQU	EQ_tt1	.	6.009E-14	.	-0.085
----	EQU	EQ_tt2	.	.	.	.
----	EQU	EQ_tt3	.	-1.82E-14	.	.
----	EQU	EQ_tt4	.	.	.	.
----	EQU	EQ_tt5	.	.	.	.
----	EQU	EQ_tt6	.	.	.	.
----	EQU	Objective~	.	.	.	1.000
----	EQU	eq1	.	-9.87E-11	+INF	7.838
----	EQU	eq2	.	-9.93E-11	+INF	15.141
----	EQU	eq3	.	-9.94E-11	+INF	16.138

	LOWER	LEVEL	UPPER	MARGINAL		
----	VAR	Z	-INF	1.501	+INF	.
----	VAR	a1	.	0.310	+INF	.
----	VAR	a2	.	0.270	+INF	.
----	VAR	a3	.	0.230	+INF	.
----	VAR	a4	.	0.190	+INF	.
----	VAR	X1_1	.	1.000	+INF	.
----	VAR	X1_2	.	1.000	+INF	.
----	VAR	X1_3	.	1.000	+INF	.
----	VAR	X1_4	.	1.000	+INF	.
----	VAR	X2_1	.	1.000	+INF	5.711E-10
----	VAR	X2_2	.	0.657	+INF	.
----	VAR	X2_3	.	1.119	+INF	.
----	VAR	X2_4	.	1.144	+INF	.
----	VAR	X3_1	.	1.000	+INF	3.2705E-9
----	VAR	X3_2	.	0.796	+INF	.
----	VAR	X3_3	.	0.760	+INF	.
----	VAR	X3_4	.	1.342	+INF	.
----	VAR	X4_1	.	0.560	+INF	.
----	VAR	X4_2	.	1.087	+INF	.
----	VAR	X4_3	.	1.102	+INF	.
----	VAR	X4_4	.	1.124	+INF	.
----	VAR	X5_1	.	0.525	+INF	.
----	VAR	X5_2	.	0.751	+INF	.
----	VAR	X5_3	.	1.229	+INF	.
----	VAR	X5_4	.	1.277	+INF	.
----	VAR	X6_1	.	0.518	+INF	.
----	VAR	X6_2	.	0.891	+INF	.
----	VAR	X6_3	.	0.872	+INF	.

----	VAR X6_4	.	1.477	+INF	.
----	VAR t1_1	.	9.599E-12	+INF	0.091
----	VAR t1_2	.	1.714E-12	+INF	0.098
----	VAR t1_3	.	.	+INF	0.100
----	VAR t1_4	.	6.861E-12	+INF	0.094
----	VAR t2_1	.	.	+INF	0.097
----	VAR t2_2	.	0.118	+INF	.
----	VAR t2_3	.	0.014	+INF	6.104E-10
----	VAR t2_4	.	0.021	+INF	3.848E-10
----	VAR t3_1	.	.	+INF	0.099
----	VAR t3_2	.	0.042	+INF	1.401E-10
----	VAR t3_3	.	0.057	+INF	7.420E-11
----	VAR t3_4	.	0.117	+INF	.
----	VAR t4_1	.	0.194	+INF	.
----	VAR t4_2	.	0.008	+INF	1.2156E-9
----	VAR t4_3	.	0.010	+INF	8.546E-10
----	VAR t4_4	.	0.015	+INF	5.515E-10
----	VAR t5_1	.	0.226	+INF	.
----	VAR t5_2	.	0.062	+INF	6.095E-11
----	VAR t5_3	.	0.052	+INF	9.048E-11
----	VAR t5_4	.	0.077	+INF	2.999E-11
----	VAR t6_1	.	0.232	+INF	.
----	VAR t6_2	.	0.012	+INF	7.466E-10
----	VAR t6_3	.	0.016	+INF	5.144E-10
----	VAR t6_4	.	0.228	+INF	.
----	VAR ee	-INF	0.040	+INF	.
----	VAR tt1	.	1.823E-11	+INF	0.085
----	VAR tt2	.	0.153	+INF	.
----	VAR tt3	.	0.216	+INF	.
----	VAR tt4	.	0.227	+INF	.
----	VAR tt5	.	0.417	+INF	.
----	VAR tt6	.	0.488	+INF	.

**** REPORT SUMMARY :

0	NONOPT
0	INFEASIBLE
0	UNBOUNDED
0	ERRORS

EXECUTION TIME = 0.609 SECONDS 3 MB 41.4.0 caab8bc0 LEX-LEG

USER: NEOS Server License prod-exec-6.neos-server.orgS221207/0001AB-GEN
 mac@d0:94:66:89:89:0f DCE1890
 License for teaching and research at degree granting institutions

**** FILE SUMMARY

Input /var/lib/condor/execute/dir_152084/gamsexec/MODEL.gms
Output /var/lib/condor/execute/dir_152084/gamsexec/solve.lst

