



NEOS Server Version 5.0
 Job# : 6179583
 Password : PKOlxpDd
 User : None
 Solver : milp:CPLEX:GAMS
 Start : 2018-07-25 15:28:09
 End : 2018-07-25 15:33:30
 Host : NEOS HTCondor Pool

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Executed on prod-exec-4.neos-server.org
 GAMS 24.9.2 r64480 Released Nov 14, 2017 LEX-LEG x86 64bit/Linux 07/25/18 15:28:11 Page 1
 General Algebraic Modeling System
 Compilation

COMPILATION TIME = 0.003 SECONDS 3 MB 24.9.2 r64480 LEX-LEG
 GAMS 24.9.2 r64480 Released Nov 14, 2017 LEX-LEG x86 64bit/Linux 07/25/18 15:28:11 Page 2
 General Algebraic Modeling System
 Model Analysis SOLVE aero_model Using MIP From line 1218

**** 2430 Integer +INF Bounds have been reset to 100 (see Option IntVarUp)

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 General Algebraic Modeling System
 Model Statistics SOLVE aero_model Using MIP From line 1218

LOOPS zz z1

MODEL STATISTICS

BLOCKS OF EQUATIONS	59	SINGLE EQUATIONS	537,709
BLOCKS OF VARIABLES	38	SINGLE VARIABLES	932,864
NON ZERO ELEMENTS	4,930,732	DISCRETE VARIABLES	2,459

GENERATION TIME = 154.887 SECONDS 1,045 MB 24.9.2 r64480 LEX-LEG

EXECUTION TIME = 156.513 SECONDS 1,045 MB 24.9.2 r64480 LEX-LEG
 L O O P S zz z1

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 General Algebraic Modeling System
 Solution Report SOLVE aero_model Using MIP From line 1218

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

```

MODEL    aero_model      OBJECTIVE objective
TYPE     MIP              DIRECTION MAXIMIZE
SOLVER   CPLEX            FROM LINE 1218

```

```

**** SOLVER STATUS      1 Normal Completion
**** MODEL STATUS       1 Optimal
**** OBJECTIVE VALUE     -7658652.4760

```

```

RESOURCE USAGE, LIMIT      151.194 1728000000.000
ITERATION COUNT, LIMIT     240     900000000

```

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IBM ILOG CPLEX 24.9.2 r64480 Released Nov 14, 2017 LEG x86 64bit/Linux
--- GAMS/Cplex licensed for continuous and discrete problems.
Cplex 12.7.1.0

```

```

Space for names approximately 62.13 Mb
Use option 'names no' to turn use of names off
MIP status(101): integer optimal solution
Cplex Time: 110.42sec (det. 65092.73 ticks)
Fixing integer variables, and solving final LP...
Fixed MIP status(1): optimal
Cplex Time: 38.55sec (det. 15060.49 ticks)
Proven optimal solution.

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MIP Solution:      -7658652.476030      (240 iterations, 0 nodes)
Final Solve:       -7658652.476030      (0 iterations)

```

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Best possible:     -7658652.476030
Absolute gap:       0.000000
Relative gap:       0.000000

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**** REPORT SUMMARY :      0      NONOPT
                        0 INFEASIBLE
                        0 UNBOUNDED

```

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G e n e r a l   A l g e b r a i c   M o d e l i n g   S y s t e m
E x e c u t i o n

```

```

---- 1220 VARIABLE results.L Results

```

```

z1 -7.65865E+6

```

```

---- 1221 VARIABLE Production.L Production at plant f of product p in day d
                        ( ALL      0.000 )

```

```

---- 1221 VARIABLE Flow.L Flow of material m from l.origin to l.destination
                        in period t (in units)

```

```

INDEX 1 = w3 INDEX 2 = j1 INDEX 3 = p1

```

		y1	y2	y3	y4
truck_XL_own	.t1	17.000	17.000	17.000	17.000
truck_XL_own	.t2	17.000			
truck_XL_own	.t3	17.000	17.000		
truck_XL_own	.t4				17.000
truck_XL_own	.t5				17.000
truck_XL_own	.t7	17.000		17.000	
truck_XL_own	.t8		17.000		17.000
truck_XL_own	.t9	17.000	17.000		17.000
	+	y6	y7	y8	y9
truck_XL_own	.t1		17.000	17.000	
truck_XL_own	.t3				17.000
truck_XL_own	.t4	17.000			17.000
truck_XL_own	.t5	17.000	17.000		
truck_XL_own	.t7		17.000		
truck_XL_own	.t8			17.000	
truck_XL_own	.t9	17.000		17.000	17.000

	+	y10	y11	y13	y14
truck_XL_own	.t1			17.000	
truck_XL_own	.t3	17.000	17.000		
truck_XL_own	.t4		17.000		17.000
truck_XL_own	.t7		17.000		
truck_XL_own	.t8	17.000			

	+	y15
truck_XL_own	.t3	17.000
truck_XL_own	.t7	17.000
truck_XL_own	.t8	17.000
truck_XL_own	.t12	17.000

INDEX 1 = w3 INDEX 2 = j1 INDEX 3 = p2

		y1	y2	y3	y4
truck_XL_own	.t2		17.000	17.000	17.000
truck_XL_own	.t3				17.000
truck_XL_own	.t5	17.000	17.000		
truck_XL_own	.t6				17.000
truck_XL_own	.t11				17.000
truck_XL_own	.t12	17.000	17.000	17.000	17.000

	+	y5	y6	y7	y8
truck_XL_own	.t1	17.000	17.000		
truck_XL_own	.t3		17.000		17.000
truck_XL_own	.t4				17.000
truck_XL_own	.t6	17.000	17.000		
truck_XL_own	.t11	17.000	17.000	17.000	17.000
truck_XL_own	.t12	17.000	17.000	17.000	

	+	y9	y10	y11	y12
truck_XL_own	.t1	17.000	17.000	17.000	17.000
truck_XL_own	.t2	17.000			17.000
truck_XL_own	.t3				17.000
truck_XL_own	.t4		17.000		17.000
truck_XL_own	.t5	17.000			
truck_XL_own	.t6		17.000		
truck_XL_own	.t11	17.000	17.000		17.000
truck_XL_own	.t12	17.000	17.000	17.000	17.000

	+	y13	y14	y15
truck_XL_own	.t1			17.000
truck_XL_own	.t2			17.000
truck_XL_own	.t3	17.000		
truck_XL_own	.t4			17.000
truck_XL_own	.t5	17.000	17.000	17.000
truck_XL_own	.t11	17.000	17.000	17.000
truck_XL_own	.t12	17.000	17.000	

INDEX 1 = w3 INDEX 2 = j1 INDEX 3 = p3

		y1	y2	y3	y4
truck_XL_own	.t3			17.000	
truck_XL_own	.t4	17.000	17.000	17.000	
truck_XL_own	.t5			17.000	
truck_XL_own	.t6	17.000	17.000	17.000	
truck_XL_own	.t7		17.000		17.000
truck_XL_own	.t8	17.000		17.000	
truck_XL_own	.t9			17.000	
truck_XL_own	.t10	17.000	17.000	17.000	17.000
truck_XL_own	.t11	17.000	17.000	17.000	

	+	y5	y6	y7	y8
truck_XL_own	.t2	17.000	17.000	17.000	17.000
truck_XL_own	.t3	17.000		17.000	
truck_XL_own	.t4	17.000		17.000	
truck_XL_own	.t5	17.000			17.000
truck_XL_own	.t6			17.000	17.000
truck_XL_own	.t7	17.000	17.000		17.000

truck_XL_own	.t8	17.000	17.000	17.000	
truck_XL_own	.t9	17.000		17.000	
truck_XL_own	.t10	17.000	17.000	17.000	17.000
truck_XL_own	.t12				17.000

	+	y9	y10	y11	y12
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truck_XL_own	.t2		17.000	17.000	
truck_XL_own	.t5		17.000	17.000	17.000
truck_XL_own	.t6	17.000		17.000	17.000
truck_XL_own	.t7	17.000	17.000		17.000
truck_XL_own	.t8	17.000		17.000	17.000
truck_XL_own	.t9		17.000	17.000	17.000
truck_XL_own	.t10	17.000	17.000	17.000	17.000
truck_XL_own	.t11			17.000	

	+	y13	y14	y15
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truck_XL_own	.t1		17.000	
truck_XL_own	.t2	17.000	17.000	
truck_XL_own	.t3		17.000	
truck_XL_own	.t4	17.000		
truck_XL_own	.t6	17.000	17.000	17.000
truck_XL_own	.t7	17.000	17.000	
truck_XL_own	.t8	17.000	17.000	
truck_XL_own	.t9	17.000	17.000	17.000
truck_XL_own	.t10	17.000	17.000	17.000

---- 1221 VARIABLE Forming.L Forming scenario s is active

(ALL 0.000)

---- 1221 VARIABLE MatOrder.L Order quantity of material m from supplier i to plant f in day d (in units)

(ALL 0.000)

---- 1221 VARIABLE StockLevel.L Amount of material m stored in facility w in day d

(ALL 0.000)

---- 1221 VARIABLE vFixedCapInvest.L Fixed capital investment of each investment gamma

fac 500000.000

---- 1221 VARIABLE vCashFlow.L Cash Flow

y1 -906617.635,	y2 -906617.635,	y3 -906617.635,	y4 -906617.635
y5 -906617.635,	y6 -906617.635,	y7 -906617.635,	y8 -906617.635
y9 -906617.635,	y10 -906617.635,	y11 -912617.635,	y12 -912617.635
y13 -912617.635,	y14 -912617.635,	y15 -637617.635	

---- 1221 VARIABLE HireResource.L Hire resource

(ALL 0.000)

---- 1221 VARIABLE FireResource.L Fire resource

(ALL 0.000)

---- 1221 VARIABLE Manuf_NrResource.L Number of resources to hire for line f in period t

(ALL 0.000)

---- 1221 VARIABLE NrTrips.L Number of trips with transportation mode trm between entity lo and entity ld in time period (d

t)

INDEX 1 = truck_XL_own INDEX 2 = w3

		y1	y2	y3	y4	y5
j1	.t1	4.250	4.250	4.250	4.250	4.250
j1	.t2	4.250	4.250	4.250	4.250	4.250
j1	.t3	4.250	4.250	4.250	4.250	4.250
j1	.t4	4.250	4.250	4.250	4.250	4.250
j1	.t5	4.250	4.250	4.250	4.250	4.250
j1	.t6	4.250	4.250	4.250	4.250	4.250
j1	.t7	4.250	4.250	4.250	4.250	4.250
j1	.t8	4.250	4.250	4.250	4.250	4.250
j1	.t9	4.250	4.250	4.250	4.250	4.250
j1	.t10	4.250	4.250	4.250	4.250	4.250
j1	.t11	4.250	4.250	4.250	4.250	4.250
j1	.t12	4.250	4.250	4.250	4.250	4.250
+						
		y6	y7	y8	y9	y10
j1	.t1	4.250	4.250	4.250	4.250	4.250
j1	.t2	4.250	4.250	4.250	4.250	4.250
j1	.t3	4.250	4.250	4.250	4.250	4.250
j1	.t4	4.250	4.250	4.250	4.250	4.250
j1	.t5	4.250	4.250	4.250	4.250	4.250
j1	.t6	4.250	4.250	4.250	4.250	4.250
j1	.t7	4.250	4.250	4.250	4.250	4.250
j1	.t8	4.250	4.250	4.250	4.250	4.250
j1	.t9	4.250	4.250	4.250	4.250	4.250
j1	.t10	4.250	4.250	4.250	4.250	4.250
j1	.t11	4.250	4.250	4.250	4.250	4.250
j1	.t12	4.250	4.250	4.250	4.250	4.250
+						
		y11	y12	y13	y14	y15
j1	.t1	4.250	4.250	4.250	4.250	4.250
j1	.t2	4.250	4.250	4.250	4.250	4.250
j1	.t3	4.250	4.250	4.250	4.250	4.250
j1	.t4	4.250	4.250	4.250	4.250	4.250
j1	.t5	4.250	4.250	4.250	4.250	4.250
j1	.t6	4.250	4.250	4.250	4.250	4.250
j1	.t7	4.250	4.250	4.250	4.250	4.250
j1	.t8	4.250	4.250	4.250	4.250	4.250
j1	.t9	4.250	4.250	4.250	4.250	4.250
j1	.t10	4.250	4.250	4.250	4.250	4.250
j1	.t11	4.250	4.250	4.250	4.250	4.250
j1	.t12	4.250	4.250	4.250	4.250	4.250

---- 1221 VARIABLE manuf_var_cost.L Variable costs of manufacturing

(ALL 0.000)

---- 1221 VARIABLE transp_var_cost.L Variable costs of transportation

y1 1305882.336,	y2 1305882.336,	y3 1305882.336,	y4 1305882.336
y5 1305882.336,	y6 1305882.336,	y7 1305882.336,	y8 1305882.336
y9 1305882.336,	y10 1305882.336,	y11 1305882.336,	y12 1305882.336
y13 1305882.336,	y14 1305882.336,	y15 1305882.336	

---- 1221 VARIABLE store_var_cost.L Variable costs of storage

(ALL 0.000)

---- 1221 VARIABLE vNPV.L = -7.65865E+6 Expected Profit

**** REPORT FILE SUMMARY

result /var/lib/condor/execute/dir_925848/result.put

EXECUTION TIME = 2.431 SECONDS 792 MB 24.9.2 r64480 LEX-LEG

USER: Small MUD - 5 User License G170411/0001AS-LNX
University of Wisconsin-Madison, Computer Sciences Dept. DC8499
License for teaching and research at degree granting institutions

**** FILE SUMMARY

Input /var/lib/condor/execute/dir_925848/MODEL.gms
Output /var/lib/condor/execute/dir_925848/solve.out

