unknown

1 D:\Python\Python\setroute\python.exe "D:\Python\Pycharm\setroute\PyCharm Community Edition 2021.2.3\plugins\python-ce\helpers\pydev\pydevconsole.py" --mode=client --port=32759

2

3 import sys; print('Python %s on %s' % (sys.version, sys.platform))

4 sys.path.extend(['E:\\1 □□□□\\3 □□□□□\\1 □□□□□□\\1 □□□□□□□□\\1_□□□□□□_□□□□\\1_LW _□□□□1\\4 □□□□\\3 python_code\\9 Code for this paper', 'E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/9 Code for this paper'])

5

6 PyDev console: starting.

7

8 Python 3.9.7 (tags/v3.9.7:1016ef3, Aug 30 2021, 20:19:38) [MSC v.1929 64 bit (AMD64)] on win32

9 >>> runfile('E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/9 Code for this paper/main_RO_BDC.py', wdir='E:/1 □□□□/3 □□□□□/1 □□□□□□/1 □□□□□□□□/1_□□□□□□_□□□□/1_LW _□□□□1/4 □□□□/3 python_code/9 Code for this paper')

10 Backend TkAgg is interactive backend. Turning interactive mode on.

11 Waiting 5s......

12

13 Optimize the ./R_16_2.xlsx instance by BDC

14

15   Master protblem status = 2 , is Optimal

16   sol_MP_obj = 815.0

17 The initial lb = -inf   ub = inf

18

19 The current iteration cnt = 0

20   Dual problem status = 2 , is Optimal

21   Add optimal cut

22   Master protblem status = 2 , is Optimal

23   Deterministic Sub problem Status= 2 , is Optimal

24   lb = 860.0884735434838   ub = 860.0884735434838

25   MPObj = 860.0884735434838   MPObj_Remove_Hua = 850.0   DualSPObj = 10.08847354348385   Hua = 10.088473543483852 Deterministic_SP_SPObj = 678.0

26

27 ub - lb = 0.0

28

29 Iteration cycle stopped by termination criterion 1: Because ub - lb <= eps, the iteration stop, and cnt = 0

30   i: 0.0 l_i: 4.0   p_i: 18.0   al_i: 10.0   sol_a_i: 10.0 sol_g_i: 0.0   d_i: 18.0   sol_taoi: 10.0   sol_deltai: 18.0 sol_deltai - sol_taoi: 8.0   sol_taoP: 10.0 sol_deltaP: 12.0   sol_deltaP - sol_taoP: 2.0   cl_i: 2014909.0   sol_c_i: 2014909.0   sol_gp_i: 0.0 total work: 2636440.0   wasted work: 2.3574630941724446

31   i: 1.0 l_i: 7.0   p_i: 23.0   al_i: 27.0   sol_a_i: 27.0 sol_g_i: 0.0   d_i: 35.0   sol_taoi: 27.0   sol_deltai: 35.0 sol_deltai - sol_taoi: 8.0   sol_taoP: 27.0 sol_deltaP: 29.0   sol_deltaP - sol_taoP: 2.0   cl_i: 2052562.0   sol_c_i: 2052562.0   sol_gp_i: 0.0 total work: 2636440.0   wasted work: 2.2146455068198025

32   i: 2.0 l_i: 4.0   p_i: 4.0 al_i: 62.0   sol_a_i: 62.0 sol_g_i: 0.0   d_i: 83.0   sol_taoi: 62.0   sol_deltai: 85.0 sol_deltai - sol_taoi: 23.0   sol_taoP: 62.0   sol_deltaP: 72.0   sol_deltaP - sol_taoP: 10.0   cl_i: 5915693.0   sol_c_i: 5915693.0   sol_gp_i: 0.0 total work: 6063812.0   wasted work: 0.5618144164100074

33   i: 3.0 l_i: 5.0   p_i: 23.0   al_i: 36.0   sol_a_i: 36.0 sol_g_i: 0.0   d_i: 51.0   sol_taoi: 36.0   sol_deltai: 51.0 sol_deltai - sol_taoi: 15.0   sol_taoP: 36.0   sol_deltaP: 39.0   sol_deltaP - sol_taoP: 3.0   cl_i: 3872396.0   sol_c_i: 3872396.0   sol_gp_i: 0.0 total work: 4086482.0   wasted work: 0.8120268240506137

34   i: 4.0 l_i: 5.0   p_i: 13.0   al_i: 34.0   sol_a_i: 34.0 sol_g_i: 0.0   d_i: 61.0   sol_taoi: 34.0   sol_deltai: 61.0 sol_deltai - sol_taoi: 27.0   sol_taoP: 34.0   sol_deltaP: 43.0   sol_deltaP - sol_taoP: 9.0 cl_i: 6930279.0   sol_c_i: 6930279.0   sol_gp_i: 0.0 total work: 7118388.0   wasted work: 0.7134962297643792

35   i: 5.0 l_i: 7.0   p_i: 13.0   al_i: 65.0   sol_a_i: 65.0 sol_g_i: 0.0   d_i: 83.0   sol_taoi: 65.0   sol_deltai: 90.0 sol_deltai - sol_taoi: 25.0   sol_taoP: 65.0   sol_deltaP: 75.0   sol_deltaP - sol_taoP: 10.0   cl_i: 6424783.0   sol_c_i: 6424783.0   sol_gp_i: 0.0 total work: 6459278.0   wasted work: 0.13083931361988135

36   i: 6.0 l_i: 5.0   p_i: 18.0   al_i: 34.0   sol_a_i: 34.0 sol_g_i: 0.0   d_i: 60.0   sol_taoi: 34.0   sol_deltai: 60.0 sol_deltai - sol_taoi: 26.0   sol_taoP: 34.0   sol_deltaP: 41.0   sol_deltaP - sol_taoP: 7.0 cl_i: 6807860.0   sol_c_i: 6807860.0   sol_gp_i: 0.0 total work: 6986566.0   wasted work: 0.6778307111104368

37   i: 7.0 l_i: 7.0   p_i: 11.0   al_i: 14.0   sol_a_i: 14.0 sol_g_i: 0.0   d_i: 31.0   sol_taoi: 14.0   sol_deltai: 31.0 sol_deltai - sol_taoi: 17.0   sol_taoP: 14.0   sol_deltaP: 17.0   sol_deltaP - sol_taoP: 3.0 cl_i: 4249947.0   sol_c_i: 4249947.0   sol_gp_i: 0.0 total work: 4613770.0   wasted work: 1.3799783040767095

38   i: 8.0 l_i: 5.0   p_i: 8.0 al_i: 58.0   sol_a_i: 58.0 sol_g_i: 0.0   d_i: 67.0   sol_taoi: 58.0   sol_deltai: 67.0 sol_deltai - sol_taoi: 9.0   sol_taoP: 58.0   sol_deltaP: 60.0   sol_deltaP - sol_taoP: 2.0   cl_i: 2110020.0   sol_c_i: 2110020.0   sol_gp_i: 0.0 total work: 2372796.0   wasted work: 0.9967076815706027

39   i: 9.0 l_i: 5.0   p_i: 2.0 al_i: 1.0   sol_a_i: 1.0 sol_g_i: 0.0   d_i: 16.0   sol_taoi: 1.0 sol_deltai: 12.0 sol_deltai - sol_taoi: 11.0   sol_taoP: 1.0 sol_deltaP: 9.0 sol_deltaP - sol_taoP: 8.0   cl_i: 2824634.0   sol_c_i: 4090125.2   sol_gp_i: 0.8 total work: 4218304.0   wasted work: 0.4861813657811284

40   i: 10.0   l_i: 6.0   p_i: 0.0 al_i: 20.0   sol_a_i: 26.4 sol_g_i: 0.8   d_i: 34.0   sol_taoi: 27.0   sol_deltai: 41.0 sol_deltai - sol_taoi: 14.0   sol_taoP: 27.0   sol_deltaP: 31.0   sol_deltaP - sol_taoP: 4.0 cl_i: 3447441.0   sol_c_i: 3658356.2   sol_gp_i: 0.2 total work: 3691016.0   wasted work: 0.12387841179772653

41   i: 11.0   l_i: 5.0   p_i: 18.0   al_i: 12.0   sol_a_i: 22.0 sol_g_i: 1.0   d_i: 27.0   sol_taoi: 22.0   sol_deltai: 30.0 sol_deltai - sol_taoi: 8.0 sol_taoP: 22.0   sol_deltaP: 25.0   sol_deltaP - sol_taoP: 3.0 cl_i: 2020295.0   sol_c_i: 2020295.0   sol_gp_i: 0.0 total work: 2504618.0   wasted work: 1.83703403073842

42   i: 12.0   l_i: 6.0   p_i: 25.0   al_i: 56.0   sol_a_i: 60.2 sol_g_i: 0.6   d_i: 66.0   sol_taoi: 61.0   sol_deltai: 70.0 sol_deltai - sol_taoi: 9.0 sol_taoP: 61.0   sol_deltaP: 64.0   sol_deltaP - sol_taoP: 3.0 cl_i: 2268481.0   sol_c_i: 4113989.0   sol_gp_i: 1.0 total work: 4218304.0   wasted work: 0.3956661255329156

43   i: 13.0   l_i: 5.0   p_i: 20.0   al_i: 56.0   sol_a_i: 60.2 sol_g_i: 0.6   d_i: 83.0   sol_taoi: 61.0   sol_deltai: 85.0 sol_deltai - sol_taoi: 24.0 sol_taoP: 61.0   sol_deltaP: 68.0   sol_deltaP - sol_taoP: 7.0 cl_i: 6064221.0   sol_c_i: 6064221.0   sol_gp_i: 0.0 total work: 6327456.0   wasted work: 0.9984486656248578

44   i: 14.0   l_i: 5.0   p_i: 6.0 al_i: 13.0   sol_a_i: 16.6 sol_g_i: 0.6   d_i: 39.0   sol_taoi: 17.0   sol_deltai: 42.0 sol_deltai - sol_taoi: 25.0   sol_taoP: 17.0   sol_deltaP: 27.0   sol_deltaP - sol_taoP: 10.0   cl_i: 6481353.0   sol_c_i: 7799573.0   sol_gp_i: 1.0 total work: 7909320.0   wasted work: 0.416269666671724

45   i: 15.0   l_i: 4.0   p_i: 0.0 al_i: 55.0   sol_a_i: 58.6 sol_g_i: 0.4   d_i: 74.0   sol_taoi: 59.0   sol_deltai: 72.0 sol_deltai - sol_taoi: 13.0   sol_taoP: 59.0   sol_deltaP: 66.0   sol_deltaP - sol_taoP: 7.0 cl_i: 3404414.0   sol_c_i: 5513566.0   sol_gp_i: 1.0 total work: 5536524.0   wasted work: 0.08707954666140705

46

47 Optimal objective = 1528.0

```
48
49   Time: 2614.000000
50
51
52
53
```