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=37360

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_CCG_ExtendedByMe.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_10_2.xlsx instance by ECCG

14.

15.   Master protblem status = 2 , is Optimal and MP obj = 444.0

16. The initial lb = -inf   ub = inf

17.

18. The current iteration cnt = 0

19.   The SP model was solved Optimal 2 and SPObj = 444.0

20.   Deterministic Sub problem Status= 2 , is Optimal

21.   Master protblem status = 2 , is Optimal

22.   lb = 771.0   ub = 771.0

23.   MPObj = 771.0   MP_delete_Hua_Obj = 459.0   Hua = 312.0   SPObj = 444.0   Deter_SP_Obj = 312.0

24.

25. ub - lb = 0.0

26.

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

28.   i: 0.0 l_i: 5.0   p_i: 12.0   al_i: 5.0   sol_a_i: 5.0   sol_g_i: 0.0   d_i: 14.0   sol_taoi: 5.0   sol_deltai: 14.0 sol_deltai - sol_taoi: 9.0   sol_taoP: 5.0   sol_deltaP: 8.0 sol_deltaP - sol_taoP: 3.0 cl_i: 2139788.0   sol_c_i: 2139788.0   sol_gp_i: 0.0 total work: 2240974.0   wasted work: 0.38379784861404015

29.   i: 1.0 l_i: 7.0   p_i: -0.0   al_i: 18.0   sol_a_i: 18.0 sol_g_i: 0.0   d_i: 32.0   sol_taoi: 18.0   sol_deltai: 32.0 sol_deltai - sol_taoi: 14.0 sol_taoP: 18.0 sol_deltaP: 20.0   sol_deltaP - sol_taoP: 2.0 cl_i: 3690865.0   sol_c_i: 3690865.0   sol_gp_i: 0.0 total work: 4218304.0   wasted work: 2.0005727420309203

30.   i: 2.0 l_i: 7.0   p_i: -0.0   al_i: 51.0   sol_a_i: 51.0 sol_g_i: 0.0   d_i: 71.0   sol_taoi: 51.0   sol_deltai: 71.0 sol_deltai - sol_taoi: 20.0 sol_taoP: 51.0 sol_deltaP: 54.0   sol_deltaP - sol_taoP: 3.0 cl_i: 5078032.0   sol_c_i: 5078032.0   sol_gp_i: 0.0 total work: 5141058.0   wasted work: 0.23905721351519474

31.   i: 3.0 l_i: 6.0   p_i: 17.0   al_i: 11.0   sol_a_i: 11.0 sol_g_i: 0.0   d_i: 32.0   sol_taoi: 11.0   sol_deltai: 32.0 sol_deltai - sol_taoi: 21.0 sol_taoP: 11.0 sol_deltaP: 14.0   sol_deltaP - sol_taoP: 3.0 cl_i: 5446369.0   sol_c_i: 5446369.0   sol_gp_i: 0.0 total work: 6327456.0   wasted work: 3.341957336408187

32.   i: 4.0 l_i: 6.0   p_i: 7.0   al_i: 40.0   sol_a_i: 40.0 sol_g_i: 0.0   d_i: 60.0   sol_taoi: 40.0   sol_deltai: 60.0 sol_deltai - sol_taoi: 20.0 sol_taoP: 40.0 sol_deltaP: 43.0   sol_deltaP - sol_taoP: 3.0 cl_i: 5202834.0   sol_c_i: 5202834.0   sol_gp_i: 0.0 total work: 6327456.0   wasted work: 4.265684028462624

33.   i: 5.0 l_i: 4.0   p_i: 23.0   al_i: 22.0   sol_a_i: 26.0 sol_g_i: 0.8   d_i: 44.0   sol_taoi: 26.0   sol_deltai: 48.0 sol_deltai - sol_taoi: 22.0 sol_taoP: 26.0 sol_deltaP: 31.0   sol_deltaP - sol_taoP: 5.0 cl_i: 5709150.0   sol_c_i: 6063812.0   sol_gp_i: 0.22420511497827889 total work: 6591100.0   wasted work: 2.0

34.   i: 6.0 l_i: 5.0   p_i: 7.0   al_i: 2.0   sol_a_i: 3.0 sol_g_i: 0.2   d_i: 21.0   sol_taoi: 3.0   sol_deltai: 21.0 sol_deltai - sol_taoi: 18.0 sol_taoP: 3.0 sol_deltaP: 7.0   sol_deltaP - sol_taoP: 4.0 cl_i: 4706531.0   sol_c_i: 5524665.666666667   sol_gp_i: 0.7757948850217211   total work: 5668346.0   wasted work: 0.5449785822295711

35.   i: 7.0 l_i: 6.0   p_i: 13.0   al_i: 47.0   sol_a_i: 51.0 sol_g_i: 0.8   d_i: 66.0   sol_taoi: 51.0   sol_deltai: 70.0 sol_deltai - sol_taoi: 19.0 sol_taoP: 51.0 sol_deltaP: 56.0   sol_deltaP - sol_taoP: 5.0 cl_i: 4994677.0   sol_c_i: 4994677.0   sol_gp_i: 0.0 total work: 5009236.0   wasted work: 0.05522219356404849

36.   i: 8.0 l_i: 5.0   p_i: 27.0   al_i: 43.0   sol_a_i: 45.0 sol_g_i: 0.4   d_i: 65.0   sol_taoi: 45.0   sol_deltai: 65.0 sol_deltai - sol_taoi: 20.0 sol_taoP: 45.0 sol_deltaP: 51.0   sol_deltaP - sol_taoP: 6.0 cl_i: 5174489.0   sol_c_i: 7019997.0   sol_gp_i: 1.0 total work: 7909320.0   wasted work: 3.3731964315516376

37.   i: 9.0 l_i: 4.0   p_i: 13.0   al_i: 16.0   sol_a_i: 20.0 sol_g_i: 0.8   d_i: 45.0   sol_taoi: 20.0   sol_deltai: 46.0 sol_deltai - sol_taoi: 26.0 sol_taoP: 20.0 sol_deltaP: 28.0   sol_deltaP - sol_taoP: 8.0 cl_i: 6782880.0   sol_c_i: 7310168.0   sol_gp_i: 1.0 total work: 7382032.0   wasted work: 0.2725796907951632

38. Time: 84.000000

39.

40.

41.

42.