

FLOEFD 多機運算



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如何同時求解多個Project?

Challenge

在FLOEFD中,常會有多個不同的設變需要求解 但一台電腦核心數有限,若Scenarios太多會讓 求解時間過久。

Solution

透過FLOEFD中的多機運算功能,可將不同的 Scenarios遠端給其他台電腦運算,即可加速整 個Project求解。

(PS:不能同時算同一個Scenarios)



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同時

求解



多機求解條件



- L. 遠端求解的電腦需要安裝相同FLOEFD版本。
- 求解的電腦需要FLOEFD solver license,若想一次在4台電腦求解4個Scenarios,就需要4個FLOEFD solver license。
- 3. 需要能telnet port到另一台電腦,通常用在區域網路內的電腦。
- 4. 求解過程中需全程連接網路,因為資料會不斷互相傳遞。
- (PS: 遠端求解電腦只需接受主電腦任務分配,不需開FLOEFD軟體即可運算。)





方法2: Batch Run

在Batch run中可看到不同的Project · 都是對應到Project tree內的Project 執行多機運算的方法跟方法一相同:

Run at → Add computer → 輸入 IP & port 30951 → 選擇此遠端電腦計算

Projects Mesh Solve New Close Monitor Run At Use Core(s) Status All projects Image: Core (s) Status [use all] Image: Deal valve.sldasm Image: Project 1 [default] Image: Project 3 [default] Image: Project 4 [default] Image: Project 5 [default] Image: Project 2 [ball filleted] Image: Project 2 [ball filleted] Image: Project 5 [default] Image: Project 2 [ball filleted] Image: Project 5 [close 1 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 1 [close 2 [ball filleted] Image: Project 5 [close 2 [ball filleted] Image: Project 5 [close 2 [ball filleted] Image: Project 5 [close 2 [ball filleted]		BA TT	rojects	🔊 P			5 ~	neous runs:	Maximum simult	(P ^o	The state			▶ Run 🖩 🕇 🖡
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方法3: Parametric Study

在Parametric Study中多機求解方法如下:

- 1. 選擇Add Computer · 就會跳出右邊的視窗
- 2. 輸入遠端電腦IP, Port 30951
- 3. 按 Add Computer

Cutput Parameters

🚻 What If Analysis 💌

Input Variables

SG Av Static Pressure 1 [Pa

Level of Initial Mesh (Automatic Mesh) []

模型 Parametric Study

Run

Summary

Status

Run at

Number of cores

Save full results

Close Monitor

Ready to run

FLOEFD

Take previous results

Recalculate

- 4. 選擇要同時計算Scenario的數量
- 5. Design point下選擇預遠端的電腦

What If Analysis 1

Design Point 1

Not calculated

[auto]

[use all]

11

 \checkmark

 \checkmark

Scenario 🏁 Goals

3

Design Point 2

Not calculated

[auto]

[use all]

Design Point 3

Not calculate

[auto]

[use all]

2

 \checkmark

 \checkmark

Design Point 4

Not calculated

[auto]

[use all]

 \checkmark

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正在編輯: Assembly

完全定義







在連接的過程中,可能出現以下2種錯誤訊息:

 上圖代表遠端電腦未安裝相同FLOEFD版次
 下圖代表未連結至遠端電腦可能原因有:

 主電腦與遠端電腦彼此無法連接
 遠端電腦Port 30951被占用

 (在後續分頁會說明處理原則)



確認是否連到遠端電腦的方法

要使用Telnet功能需開啟,如下圖

控制台→所有控制台項目→程式和功能→開啟或關閉Windows功能→Telnet用戶端勾選

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確認是否連到遠端電腦的方法

- 1. CMD開啟命令提示字元
- 2. 輸入telnet IP Port (如下圖)
- 3. 若一片空白,代表此IP的遠端電腦 Port 有連通
- 4. 顯示連線失敗代表此IP的遠端電腦 Port 無連通 (失敗的可能原因為防火牆擋住或是不同網段造成,請尋求IT協助)





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修改預設port方法

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修改預設port方法如下:

Tools → Options → Remote Solver → Port(預設30951)

-		
	@	Tools
	R	Create Lids
	R	Leak Tracking
2		EDA Import
2	-	Package Creator
	Ö	PDML or XML Import
		Calculator
0	1	Copy to Project
Y	1	Parameter Editor
	\$₽	Add from Components
	¢	FMU
0	\$	Export Results to Simulation
	Z	CAD to Flomaster
	L	1D Elements from CAD
(×	Options
	~ *	5

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General Options	£2	ALL	
View Options	-15		
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Port	30951	1 19-1	



The End



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