

Moldex3D

Parallel Computing performance of Intel E5-1620

Environment

System Requirements

Platform	OS	Remark
Windows / x86-64	Windows 10 series	Moldex3D 2021 is certified for Windows 10 *: Update to KB2919355 or newer version required
	Windows 8 series	
	Windows 7 series	
	Windows Server 2012 R2*	
	Windows Server 2016	
	Windows Server 2019	
Linux / x86-64	CentOS 6 series	Linux platform is used for calculation resource only. Moldex3D LM, Pre-processor and post-processor do NOT support Linux platform.
	CentOS 7 series	
	RHEL 6 series	
	RHEL 7 series	
	SUSE Linux Enterprise Server 12	

Hardware Requirements

Minimum	
CPU	Intel® Core i7 Sandy Bridge series
RAM	16 GB RAM
HDD	1 TB free space
Recommended	
CPU	Intel Xeon Platinum 8000 series
RAM	64 GB RAM
HDD	4 TB free space
Graphic Card	NVIDIA Quadro series, AMD Radeon series
Screen Resolution	1920 x 1080

Note: To increase calculation efficiency and stability, it is recommended to switch off Hyper-Threading under RC/DMP structure.

Computation Time & Speed Up (Solid)

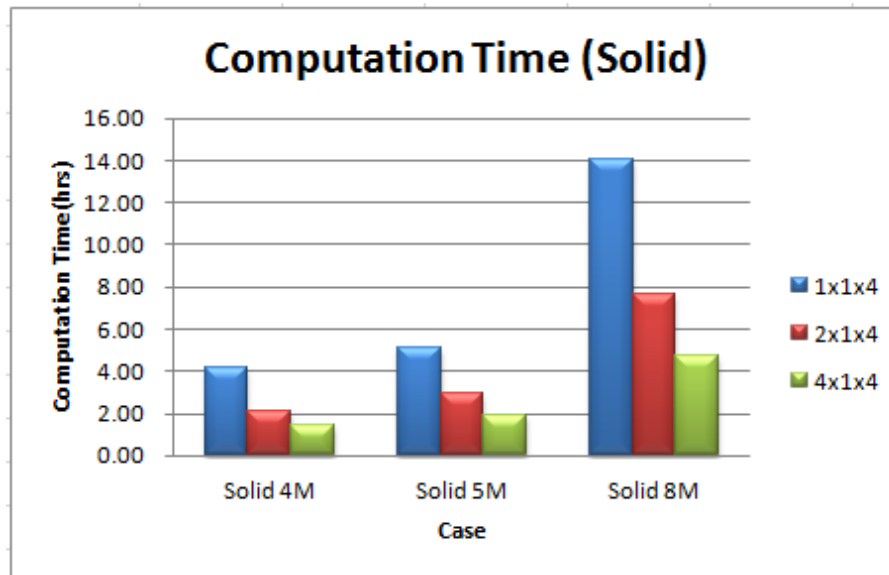
Speed up for 4 cores

- 1.00

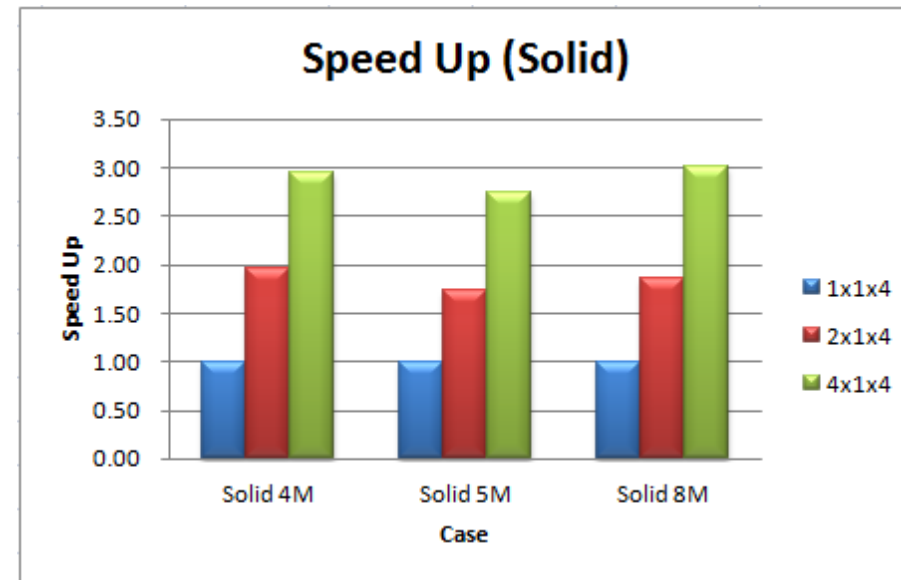
Speed up for 16 cores

- 2.75 ~ 3.00

Test Case	Solid 4M	Solid 5M	Solid 8M
Mesh	Solid Mixed/BLM	Solid Mixed	Solid Mixed
Element	4,167,287	4,813,180	8,012,986
Analysis Type	Solid/Injection		
Analysis Sequence	Filling		



Computation Time (Lower is better)



Speed Up (Higher is better)

Computation Time & Speed Up (eDesign)

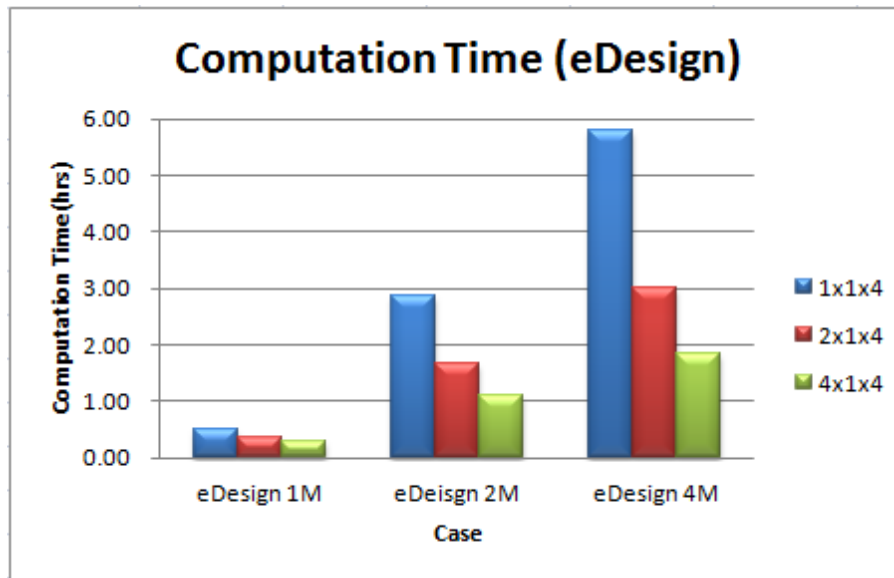
Speed up for 4 cores

- 1.00

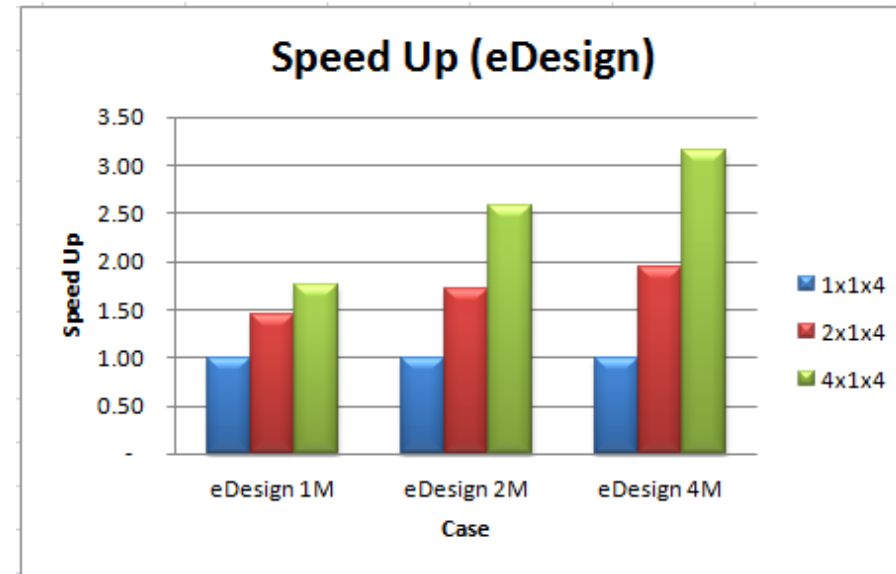
Speed up for 16 cores

- 1.76~3.16

Test Case	eDesign 1M	eDesign 2M	eDesign 4M
Mesh	Level 5	Level 5	Level 5
Element	1,248,647	2,809,636	4,556,432
Analysis Type	eDesign/Injection		
Analysis Sequence	Filling		



Computation Time (Lower is better)



Speed Up (Higher is better)

Details

Details of computation time & speed up

Solid model						
Test Case	Solid 4M		Solid 5M		Solid 8M	
NodexCPUxCores	Hrs	Speed Up	Hrs	Speed Up	Hrs	Speed Up
1x1x4	4.12	1.00	5.15	1.00	14.08	1.00
2x1x4	2.11	1.95	2.97	1.73	7.62	1.85
4x1x4	1.40	2.95	1.87	2.75	4.70	3.00

eDesign model						
Test Case	eDesign 1M		eDesign 2M		eDesign4M	
NodexCPUxCores	Hrs	Speed Up	Hrs	Speed Up	Hrs	Speed Up
1x1x4	0.52	1.00	2.88	1.00	5.79	1.00
2x1x4	0.36	1.44	1.67	1.72	3.00	1.93
4x1x4	0.30	1.76	1.12	2.57	1.83	3.16

Note:
All computation time in this page does not include time of mesh conversion, mesh partition or local remesh

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