MEng Project Log

by

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Contents

1 8th May

1. Applied for the access to ICICS 227
2. Applied for the access to compute canada

2 9th May

1. Installed Gmesh, Paraview and get access to compute canada
2. Read Eigenfrequency analysis from COSMOL
3. Learn how to use Gmesh: geometry part and the mesh part with two case: vertical plane and cylinder
4. Install the Simflow

3 10th May

3.1 Important Functions

1. simflow : run simflow to solve
2. mpirun -nx simflowOmpi -npx
3. simGmshCnvt -msh *.msh :mesh
4. simPlt -type vtk : post processing
5. gmsh -3 : convert geo to msh
6. cd (home) .(current) ..(previous)
7. vi :q :w :q! : quit, write, write&quit, and quit without saving
8. cp (source) (destination) :copy
9. mv (source) (destination) :move
10. scp :copy from others computer
11. rm -r(folder)
12. scp -r ineogi@beluga.computecanada.ca: /scratch/CavityTutorial .
13. scp conroyli@beluga.computecanada.ca: /scratch/CavityTutorial/debug1/*.vtk .

3.2 Case 1: Lid Driven Cavity

1. 10 time steps with 0.1s
2. saved in ‘debug1‘’
3. which simflow :give the location of the first version of simflow
4. /simflow-Nihar/bin/simflow
5. vi simflow.config
6. simPlt -type vtk -min 0 -last 10 in CavityTutorial

3.3 Files

1. cavity.geo
2. cavity.msh : save as msh
3. .crd .cnn .nbc(nodal BC) .srf
4. cavity.def
5. eightNodeBrick sixNodeWedge fourNodeTech
6. simGmshCnvt -msh Case1.msh
7.

3.4 Files

1. InteractiveNode
2. salloc –ntasks=16 –account=def-rjaiman –time=1:0:0 –mem-per-cpu=4G
3. squeue
4. multiple cpu task: simflow.config
5. mpirun -n 16 /simflow-Nihar/bin/simflowOmpi -np 16

4 13th May

1. Fix Case1 files
2. Check email for the lab access