GMM On Legion

Open MobaXterm

Load the Matlab module

module load xorg-utils/X11R7.7  
module load matlab/full/r2016b/9.1

Change directory to your Matlab folder

cd ~/Scratch/Matlab\_remote\_jobs

Specify Legion options (export SGE\_CONTEXT=exclusive)

export SGE\_OPT=h\_rt=5:0:0,mem=2G,matlab=1

Launch the Matlab GUI

matlab

Start a terminal session

c = parcluster ('LegionGraceProfile');

Create a cluster profile

myJob = createCommunicatingJob (c, 'Type', 'Pool');

Specify the number of workers and any **variables**

num\_workers = 16;

load('Wake\_cells\_2d.mat')

Pass code to the workers;

myJob.AttachedFiles = {‘GhoshMarcusModels.m’}

set the minimum and maximum number of workers for the job

myJob.NumWorkersRange = [num\_workers, num\_workers];

Create a MATLAB task to be executed as part of the job. For this example it will consist of executing the Matlab function *RunAndVisualiseMonodomainSimulation*. The rest of arguments indicate that the task returns three parameters and there are five input arguments to the function. These are passed as a cell array:  
 task = createTask (myJob, @GhoshMarcusModels, 6, {X, 15});

Submit the job

submit (myJob)

To collect data:

results = fetchOutputs(myJob)

If you closed the Matlab GUI

matlab

c = parcluster ('LegionGraceProfile'); # get a cluster object

jobs = findJob(c); # gets a list of jobs submitted to that cluster

job = jobs(30);re # pick a particular job

results = fetchOutputs(job)

Useful Legion Commands:

* cd Scratch/Matlab\_remote\_jobs/
* mkdir Compressed
* mv Job\* Compressed
* mv Job\* ../
* cd ~/Scratch/Matlab\_remote\_jobs/Legion\_Code
* git add Grammar\_Freq.m
* git add .
* git commit -m "first commit"
* git push
* rm Job\*
* rm -r Job\*