

Parallel/Grid Mathematica on Vikram-100 HPC

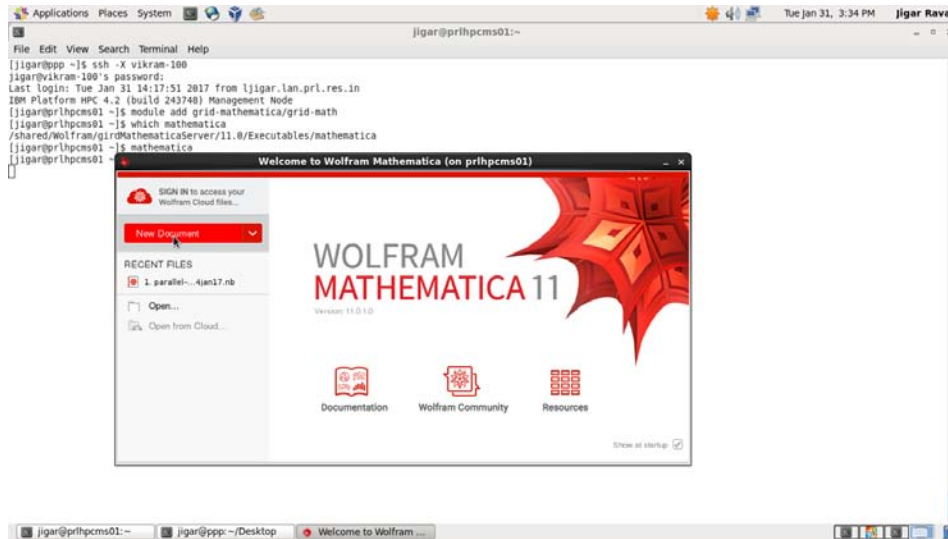
(1) Login to PRL HPC Cluster – vikram-100

```
ssh -X username@vikram-100
```

(2) After successful login, add the mathematica path using below module add command

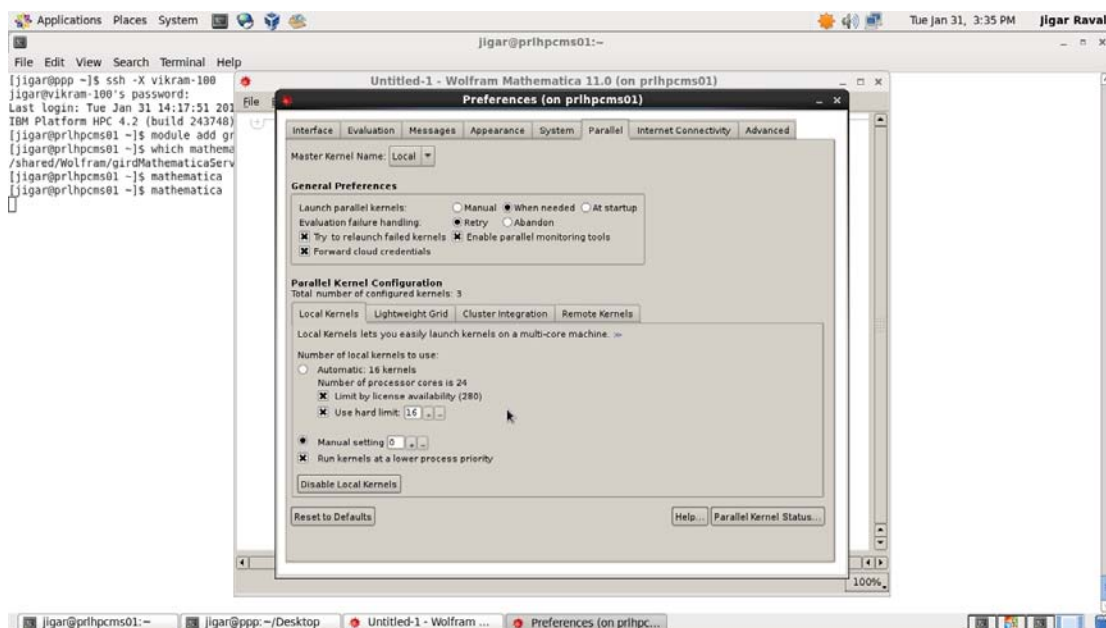
```
module add grid-mathematica/grid-math
```

Now, to open mathematica type command - mathematica



(3) Click on New Document. It will open blank mathematica notebook.

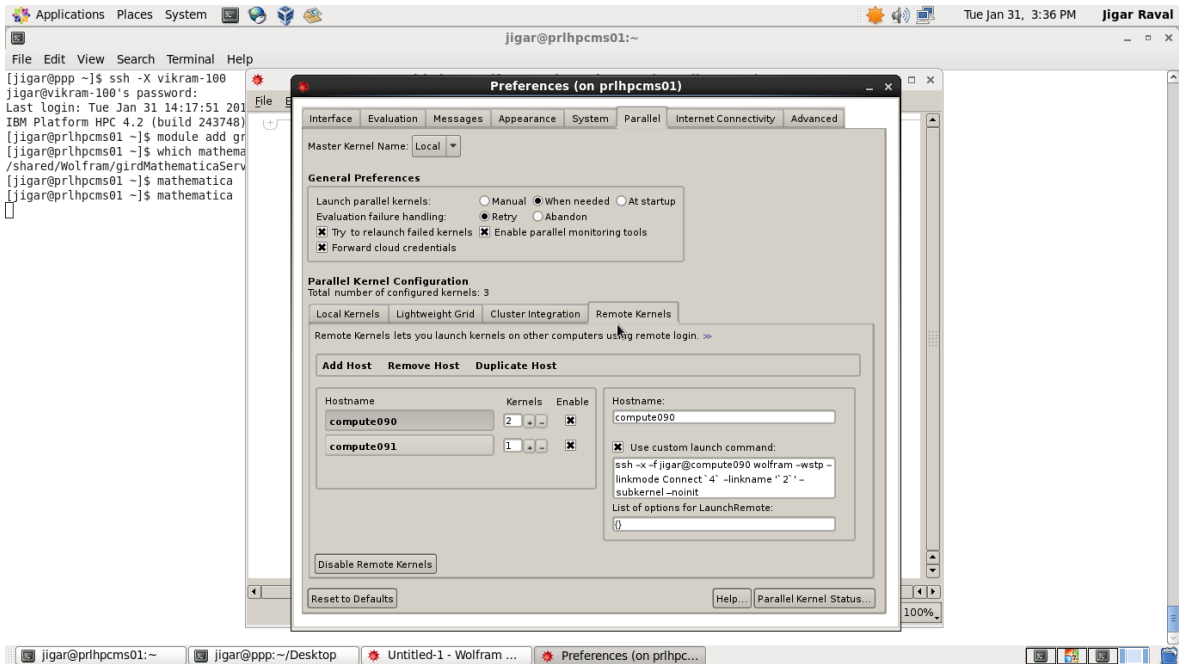
(4) Click on edit → Preferences → Parallel and set the Local Kernels parameter as shown in below image.



(5) Now, click on Remote Kernels and add the hosts as shown in below image. At present, for testing, kindly add hosts – compute090, compute091, compute092, compute093, compute094, compute095, compute096. Kindly CAREFULLY type the following command under the caption - “Use custom launch command”. Any mistake in below command does not start the remote kernel. *Replace username with your hpc login name in below command.*

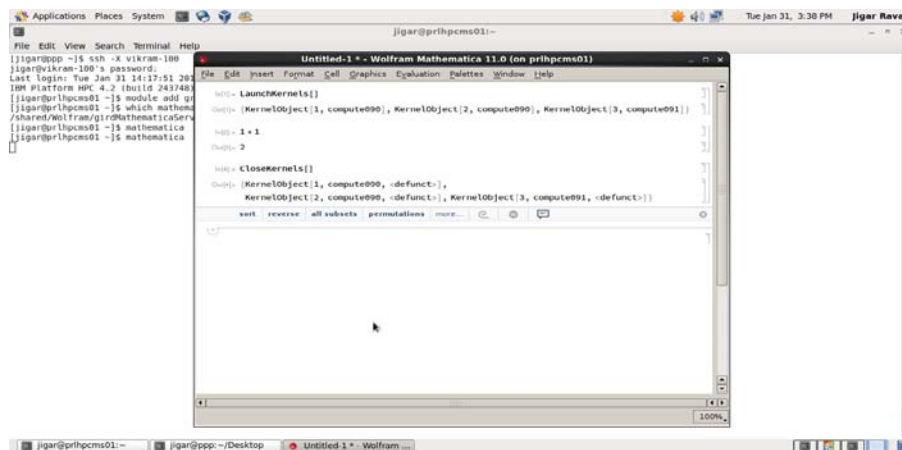
```
ssh -x -f username@compute090 wolfram -wstp -linkmode Connect `4` -linkname `2` -subkernel -noinit
```

*** Kindly replace username with your loginname of Vikram-100.



(6) After setting the parameter, close the windows and click on mathematica blank notebook.

(7) Type the command – `LaunchKernels[]` and execute to launch the kernel on remote host (compute090 and compute091). Now, run your parallel mathematica code.



(8) Type the command – *CloseKernels[]* and execute to close/shutdown the kernel on remote hosts. Kindly do not forget to close/shutdown the running kernel. This will reduce the usage of memory and cpu on compute nodes.

Kindly send your feedback/suggestions to support@prl.res.in