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EXERCISES:
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1. Script Submission:

   • Repeat the example "Submit a script to the Grid" using your VM. The example code is attached in Lecture 17. Submit the job to the Grid, check the status and retrieve the results.
   • Modify the 'script.sh' wrapper given in the previous example to *ping* a host, such as: *$ ping -c 5 www.surfsara.nl*.
       o The hostname can be given as argument in your JDL requirements.
       o Submit the job to the Grid, check the status and retrieve the results
   • Modify the 'script.sh' wrapper given in the previous example to perform a checksum on a data file. Compare the results by running the *cksum* command on the course VM and the Worker Node (WN).
       o The data file should be transferred with the InputSandbox. You can use any small file (<10MB) of your preference or the file given here: data
       o Submit the job to the Grid, check the status and verify the results.

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2. Executable Submission:

   • *Note* that the executable file might not have executable permissions after it is copied to a Worker Node. Use a script to set the correct environment for the execution of a binary.
   • Repeat the example "Submit executable" using your VM (the example code is attached in Lecture 18). Submit the job to the Grid, check the status and retrieve the results.
   • Modify the 'compiled.sh' wrapper given in the previous example and replace the application with a simple application that calculates the sum of 2 numbers.
       o Compile the program sum.c and transfer the executable to the Grid with the InputSandbox.
       o The 2 input numbers can be given as arguments in your JDL requirements.
       o Submit the job to the Grid, check the status and retrieve the results
   • Modify the 'compiled.sh' wrapper given in the previous example and replace with an application that calculates pi (example presented in Lecture 7).
       o Compile the program gridpi.c and transfer the executable to the Grid with the InputSandbox.
       o Submit the job to the Grid, check the status and retrieve the results

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3. Advanced Jobs:

   • Collections: run a collection of gathered jdl files using the '--collection' option.
       o In your VM, create a 'JDLfiles' directory
       o Move few jdl files from previous examples in this directory, eg. hostname.jdl, echo.jdl
       o Submit the job with: *$ glite-wms-job-submit -d $USER -o jobIds --collection <JDLfiles_dir/>*, then check the status and retrieve the results
   • Multicore job: repeat the example "Multicore submit" using your VM (the example code is attached in Lecture 20). Submit the job to the Grid, check the status and retrieve the results.

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