SUPERCOMPUTING WALES

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Guide to Running
TELEMAC

What is TELEMAC

TELEMAC is a collection of modelling tools to simulate free-surface flows. This guide to running TELEMAC provides instructions on how to run a standard TELEMAC test case on the Supercomputing Wales systems.

Step 1 - Log in

The examples used in this guide is configured to run on the Cardiff Skylake *Hawk* cluster. Connect to *hawklogin.cf.ac.uk* with your Supercomputing user credentials using your preferred method (e.g. PuTTY from a Windows machine or ssh from any Linux terminal, thus

```
ssh –l your_username hawklogin.cf.ac.uk
```

The steps below involve typing commands (**in bold font**) in the terminal window.

Step 2 - Load a TELEMAC module

In common with most of the application guides in this series, we assume at the outset that the module of choice would be selected from those originally available on HPC Wales. Thus a necessary first step would be to gain access to that module set by issuing the commands

```
module purge
module load hpcw
```

Note that the "module purge" command is required to prevent any unintentional collision with pre-existing modules. Subsequently issuing the module command

```
module avail
```

will provide visibility of and access to the entire set of HPCW modules.

A number of TELEMAC binary packages are available.

- List preinstalled TELEMAC versions:

  ```
  module avail TELEMAC
  ```

- Load your preferred version (v6p2r1 is used in this example):

  ```
  module load TELEMAC/v6p2r1
  ```

- Confirm the loaded modules. All dependencies are handled automatically via the module file:

  ```
  module list
  ```

Step 3 - Create a directory

From your home directory, create a directory to hold the TELEMAC data:

```
cd ~
mkdir TELEMAC
```

Step 4 - Obtain a test case

TELEMAC has a large number of predefined test cases, which are located at:

```
/app/environment/TELEMAC/v6p2r1/examples
```

TELEMAC has different solvers for different category of physical problems. For this example, we are using the *011_bumpflu* case, which is a *telemac2d* example (two-dimensional flow).

```
cd ~/TELEMAC
```
```
cp -rp /app/environment/TELEMAC/v6p2r1/sb/intel-13.0/intel-
4.1/v6p2r1_validation/telemac2d/tel2d_v6p2/011_bumpflu .
```
```
cd 011_bumpflu/
```

Step 5 - Submit a job

Now the current directory should contain all required files to run a TELEMAC job. In particular, the SLURM jobscript is called *telemac2d_submit.SLURM.q* and the .cas file is where configurations of this test case are located.

- Submit the job using:
  ```
  sbatch telemac2d_submit.SLURM.q
  ```

- Check the job queue using:
  ```
  squeue
  ```

- When completed, output can be found in a file called TELEMAC2D.o.<JOBID> and errors, if any, can be found in TELEMAC2D.e.<JOBID> (where <JOBID> is a unique ID generated by the queuing system).

- If your job is successful, its output should look similar to what's in file *TELEMAC2D.o. 14830*

References

- Official TELEMAC homepage http://www.opentelemac.org/
- TELEMAC Doxydoc source code documentation http://docs.opentelemac.org