

Porting CLM to other machines

1. Find closest machine to your machine

Look through the files in scripts/ccsm_utils/Machines find the machine that might be the closest to your machine.

2. Copy the files over

Example:

```
cp Macros.lightning_pgi Macros.mymachine_pgi
cp env_machopts.lightning_pgi env_machopts.mymachine_pgi
cp mkbatch.lightning_pgi mkbatch.mymachine_pgi
```

3. Create and edit a new machine XML tag

In scripts/ccsm_utils/Machines/config_machines.xml

```
$EDITOR config_machines.xml
```

Copy the <machine MACH="lightning_pgi" tag over to a new MACH="mymachine_pgi" edit that tag to contain the correct information needed.

4. Edit the files as needed changing paths, modules etc. as necessary...

Change the *.mymachine_pgi files as needed to contain correct information:

Macros.mymachine_pgi – make sure paths to NETCDF, MPI and compiler names/mpi-lib-name are correct.

env_machopts.mymachine_pgi – Environment needed to build/run the model. Make sure you have the correct path to these compilers, if not set the path as needed in env_machopts.mymachine_pgi. Also add any env variable settings or module settings needed on this machine to use the needed compilers.

mkbatch.mymachine_pgi – script to create the batch information at the top of run scripts. Setup the batch information needed to run on this machine. Make sure "mach" is set appropriately at the top of the script.

5. Setup a simple case, get it building and running

Then setup a simple case with create_newcase in scripts, and debug it, until it's working. Once, things are working you can copy any changes you made in your case back into the scripts directory so other cases can use the updates as well.

6. Test that restarts are working

Once a simple case is working do some testing to make sure restarts are working using either create_test and/or create_suite.

7. Scientific validation

See some more porting information at...

http://www.cgd.ucar.edu/cseg/porting/ccsm4_porting

http://www.cgd.ucar.edu/cseg/porting/ccsm4_port2linux

After doing this create a case that replicates a case run on a trusted machine and make sure the resulting climate appears to be similar.