TUTORIAL 04:
CREATE MY CROCO CLIM CONFIG

OBJECTIVES

- Prepare the CROCO input files
- Compile the code
- Run the model
- Visualize the outputs

STEP 1: Logging onto the cluster

- From a terminal/konsole:

```
ssh -X login@scp.chpc.ac.za
```

- Reserve an interactive processor for pre-processing:

```
[login@login2 ~]$ qsubi1
```

- Go in your CROCO directory (lustre/croco):

```
[login@cnode022 ~]$ cd lustre/CROCO/croco-v2.0.1
```

- Go into your Run Clim:

```
[login@cnode0220 ]$ cd Run_Clim
```

STEP 2: Creating input files for Run_Clim

- Launch Matlab :

```
[login@cnode0220 Run_Clim]$ matlab -nodesktop
```

- Create your croco grid

```
>> start; make_grid;
```

- Create your surface forcing files

```
>> make_forcing; make_bulk; …
```

- Create your CROCO initial and boundary conditions

```
>> make_clim; OR make_bry; make_ini;
```

STEP 3: Compiling CROCO model

- Copy the script to compile the code in your Run_Clim directory :

```
cp /mnt/lustre/users/sillig/CROCO_TRAINING_Basic/3_Some_files/jobcomp_lengau .
```

- Edit and fix the parameter file **param.h**

```
[login@cnode0220 Run_Clim]$ nedit param.h &
```

- Edit and set the **cppdefs.h**

```
[login@cnode0220 Run_Clim]$ nedit cppdefs.h &
```

- Compile CROCO using the **jobcomp_lengau** script

```
[login@cnode0220 Run_Clim]$ ./jobcomp_lengau
```

STEP 4: Running CROCO

- Copy the job file to run the code in your Run_Clim directory :

```
cp /mnt/lustre/users/sillig/CROCO_TRAINING_Basic/3_Some_files/run_croco.pbs .
```

- Edit and fix the parameter file **croco_inter.in**

```
[login@cnode0220 Run_Clim]$ nedit croco_inter.in &
```

- Edit and fix the script **run_croco.pbs**

```
[login@cnode0220 Run_Clim]$ nedit run_croco.pbs &
```

- Launch your simulation

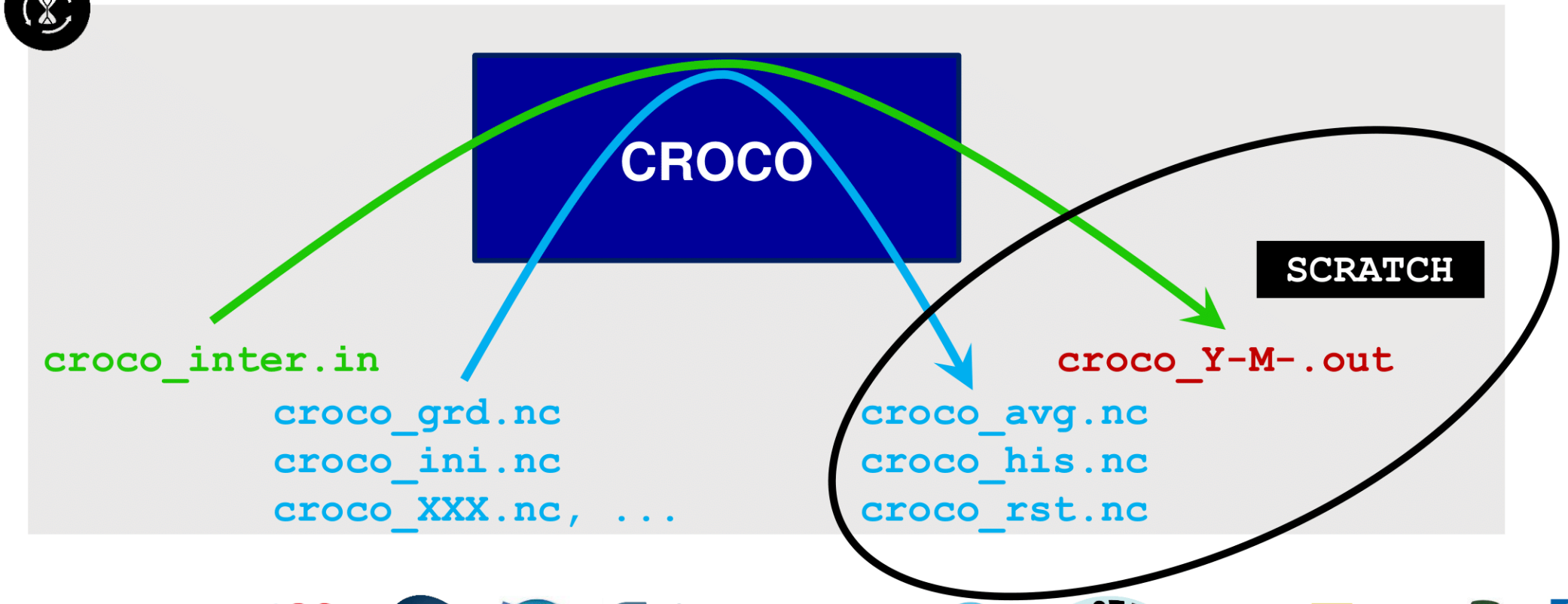
```
[login@cnode0220 Run_Clim]$ qsub run_croco.pbs
```

STEP 4: Running CROCO

Run_Clim

`run_croco.pbs:` → `run_croco.pbs.oxxxx`, `run_croco.pbs.exxxx`

1. Copy executable, input files, and croco_inter.in.template
2. Loop over time : adjust croco_inter.in and run CROCO:



Variables and forcings

Prognostic variables:

u

v

temp

salt

zeta

Forcing variables:

sustr

svstr

srfl

stfl

precip

THE BUG SHEET

- Problem associated with :
  - Diagnostic 1
    - ↪ Solution:
  - Diagnostic 2
    - ↪ Solution:

STEP 5: Visualising model outputs

- Launch Matlab and edit the following file:

```
>> edit croco_diags.m
>> croco_diags
```

- Make your first plots:

```
>> plot_diags
```

- Visualise the outputs with croco_gui

```
>> croco_gui
```

- Enjoy!!!

STEP 6: Exiting

- Exit Matlab:

```
exit
```

- Give back the compute node:

```
exit
```

- Logoff the Lengau cluster:

```
exit
```