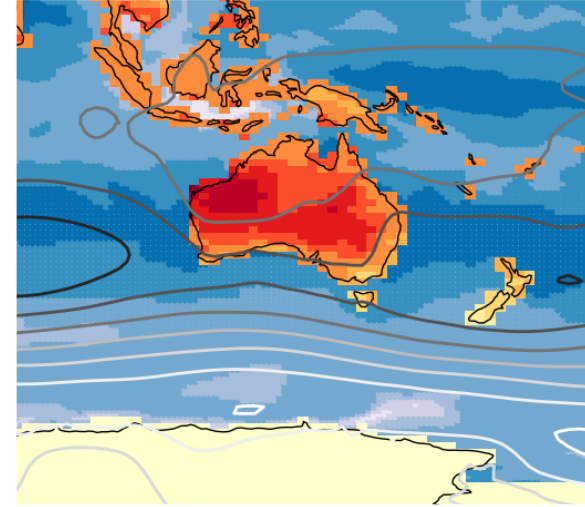


# Sharing UM Jobs

Scott Wales, CoE CMS



# Shared Facilities

- ACCESS
  - accesscollab
  - access-svn
  - raijin
- Met Office & UK Uni's
  - puma
  - monsoon
  - [future] shared code repository

# Sharing UM Jobs

- Local sharing within a NCI project
  - Read access to each other's /short files
- ACCESS collaborations
  - Harder to see files on Raijin, can still see UMUI jobs
- International Collaboration
  - Need to import UMUI job and basis, some localisation required

# Files on the UI Server

- Basis file
- Overrides
- Hand Edits
- User STASH files

The image shows three overlapping screenshots of a software interface, likely for a climate model, showing configuration options for user STASHmaster files, overrides, and hand edits.

**Top Screenshot: Specify User STASHmaster files**

Using user STASHmaster files for the Atmosphere.

Specify the STASHmaster files

No.	Specify Local File
1	~access/umdir/HG2AQ_local/lake_evap.stash
2	~access/umdir/HGPKG1/aod.stash

**Middle Screenshot: User Override Files**

Including the following list of user machine overrides

User machine overrides

Number	Full path name	Include Y/N
1		
2		
3		

**Bottom Screenshot: Hand edits to be applied on processing**

Specify full path to hand edit scripts to be applied to the processed output.  
Alternatively type a command to be applied to the processed output

Hand edits

Script	Full path name	Include Y/N
1	~access/umdir/HGPKG1/over.scr	Y
2	~access/umdir/HGPKG1/field_hdr_incr.ed	Y
3	~access/umdir/HGPKG1/fcm_checks.scr	Y
4	~access/umui_jobs/hand_edits/access1.3/increase_tr	Y
5	~access/umui_jobs/hand_edits/access1.3/coupled_hg	Y
6	~access/umui_jobs/hand_edits/access1.3/monthly_du	Y
7	~access/umui_jobs/hand_edits/access1.3/hatforce.ed	Y
8	~access/umui_jobs/hand_edits/access1.3/ancilhead.e	Y
9	~access/umui_jobs/hand_edits/access1.3/mod_NTILE	Y

# Files on the HPC

- Initial Conditions
- Ancillaries
- User Prognostics
- LBCs

The image displays four overlapping screenshots of a configuration interface, likely for a climate model, showing various settings and options.

**Specification of the start dump**

Elsewhere, you have specified the start date for all sub-models as

Year 1978  
Month 1  
Day 1

**Orography**

Define the use of the Orography ancillary file and fields

Enter directory or Environment Variable \$ACCESS Ancil and file name qrpam.oro

☐ The ancillary orography to be configured

**LW and SW radiation Spectral files**

Note, spectral files must be chosen in conjunction with radiation options.

You have chosen general 2-stream SW radiation.

Specify the location of the shortwave spectral file

**Specification of User Prognostics**

All user-prognostic fields must be initialised by the reconfiguration.

Elsewhere, you have specified that the reconfiguration is on.

**Specify Initialisation Option**

Item	NAME	Option	If 6: CONSTANT	If 7: NAMED FILE ON TARGET MACHINE
290	DAILY ACCUMULATED LAKE FLUX KG/M2	3		
293	NET ENERGY CHANGE THIS PERIOD JAH	4		

# Things to consider

- What files does the job use?
  - Not trivial to easily find!
- Can other people see needed files?
  - ACLs
  - Shared directories
- Is the code in source control?

# Listing files

- UM-dependencies script
  - <https://github.com/coecms/um-utils>
- Reads a basis file & lists the used files, expanding variables
- Not all listed files will be used by the run

**\$ bash <(/um-dependencies ~/umui\_jobs/basis\_sabqa.vn7.3 )**

/data/projects/access/ancil/CMIP5/SPARCO3\_1850-2009\_L38.anc  
/qrclim.smow\_igbp  
/qrclim.slt\_new  
/data/projects/access/ancil/access\_v2/qrparm.soil\_ch  
/qrparm.veg.newalb  
/data/projects/access/ancil/HadGEM3\_cal365/sstbc\_1951\_2008\_n96  
/data/projects/access/ancil/HadGEM3\_cal365/sicbc\_1951\_2008\_n96  
/qrclim.uvcurr  
/data/projects/access/ancil/access\_v2/qrparm.mask  
/data/projects/access/ancil/access\_v2/qrparm.rog  
/data/projects/access/ancil/CMIP5/scycle\_1850\_2000\_IPCCf  
/blankdir/tracerancil/blankfile  
/data/projects/access/ancil/CMIP5/VOLC\_ND\_N96\_L38  
/data/projects/access/ancil/HadGEM3\_cal365/sulpc\_oxidants\_N96\_L38  
/data/projects/access/ancil/access\_v2/cable\_vegfracN96.2005.anc  
/data/projects/access/ancil/access\_v2/cable\_vegfunc\_N96.anc

...



# Shared Directory Layout

## **accesscollab:**

~access/umui\_jobs/

hand\_edits/

access1.3/

ukca/

...

overrides/

userstash/

## **raijin:**

~access/

apps/

data/

UM\_input/

ancil/

umdir/

vn7.3/



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# Source Code

- Make use of SVN branches, not working copies
- Make sure branches have histories leading back to trunk - important if you want to merge changes!

# Testing

- Check you can run the model if you've changed any file locations or permissions
- Record what output values you get (e.g. Abs. Norm values for the initial few timesteps)
- Ask a colleague to run the model (preferably someone in a separate group to ensure permissions are correct)

# ACCESS user jobs

- Jobs published to the 'access' user are visible to everyone in the UMUI
- Useful for widely-used jobs
- Sample jobs
  - ACCESS 1.3 AMIP
  - Met Office N48 tests

# Help

ACCESS NCI Helpdesk:

[access\\_help@nf.nci.org.au](mailto:access_help@nf.nci.org.au)

Wikis:

[climate-cms.unsw.wikispaces.net/UM](http://climate-cms.unsw.wikispaces.net/UM)

[trac.nci.org.au/access](http://trac.nci.org.au/access)

[collab.metoffice.gov.uk](http://collab.metoffice.gov.uk)