The ACCESS Simulation and Modelling Service: Status

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Australian Government
Bureau of Meteorology

The Centre for Australian Weather and Climate Research
A partnership between CSIRO and the Bureau of Meteorology

CSIRO

WP1: Goals

- Library of supported and documented standard experiments
  - Including climate, NWP, idealised
- Improved user interface for the coupled model
  - Experiment configuration database for coupled model
- BOM research and operational NWP configurations available
- Adoption of new Met Office technical infrastructure
- Integration with archiving and analysis services
- Better access to BOM data (forecasts, analyses, initial conditions)
- *Goal is to improve ease of use, reproducibility, support and sharing of code, data and experiments*

Revised milestone dates

- Initial release of the ACCESS modelling infrastructure. Initial experiment library set up and documented. 31 Mar 2013
- Initial release of coupled model user interface. Workflow scheduling working at NCI. NWP suite installed. 1 Jun 2013
- Coupled modelling suite and user interface complete. Workflow scheduling working at NCI. NWP suite installed. Experiment database for coupled model complete. 1 Aug 2013
- Release of latest Met Office infrastructure used in NWP configurations. Modelling simulation service available for general users. 1 Dec 2013
- Release of model infrastructure for prototype “ACCESS2”. 1 Dec 2013
- Final release 31 Mar 2014

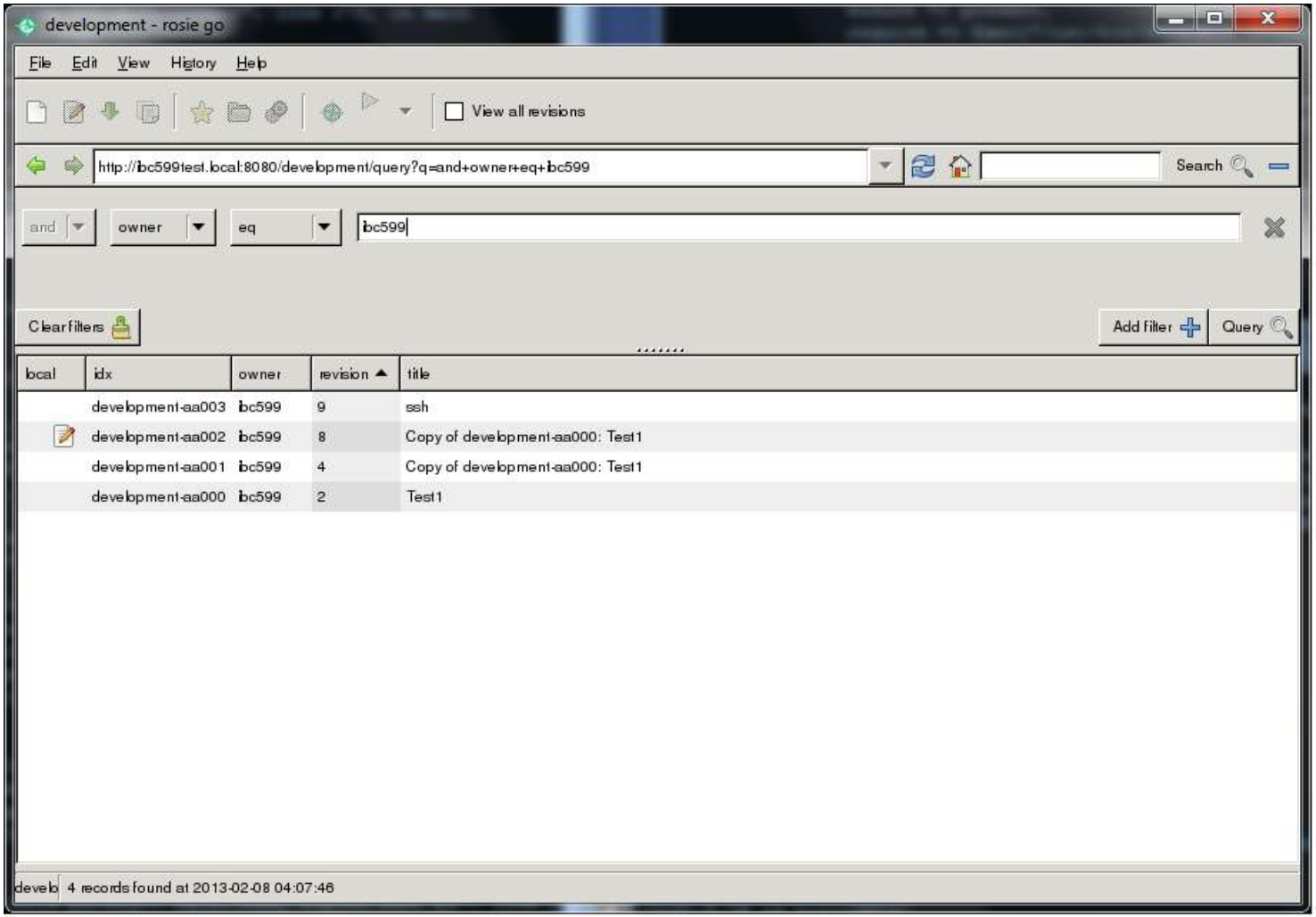
Progress

- accessdev and other infrastructure
- Coupled model UI
- NWP
- IRIS
- Issues

New infrastructure

- Rose, cylc etc running on vayu
- Accessdev machine almost working
  - Simpler job submission
- /g/data/access on vayu
  - Aim is to unify /data/projects/access and ~access
  - Also make solar2 structure the same
  - Access module environment
  - Use of file access control lists
- Access wiki moved from access-svn to trac.nci.org.au for better accessibility

Coupled model UI: Rosie



Coupled model UI: Rose edit

File Edit View Action Macro Help

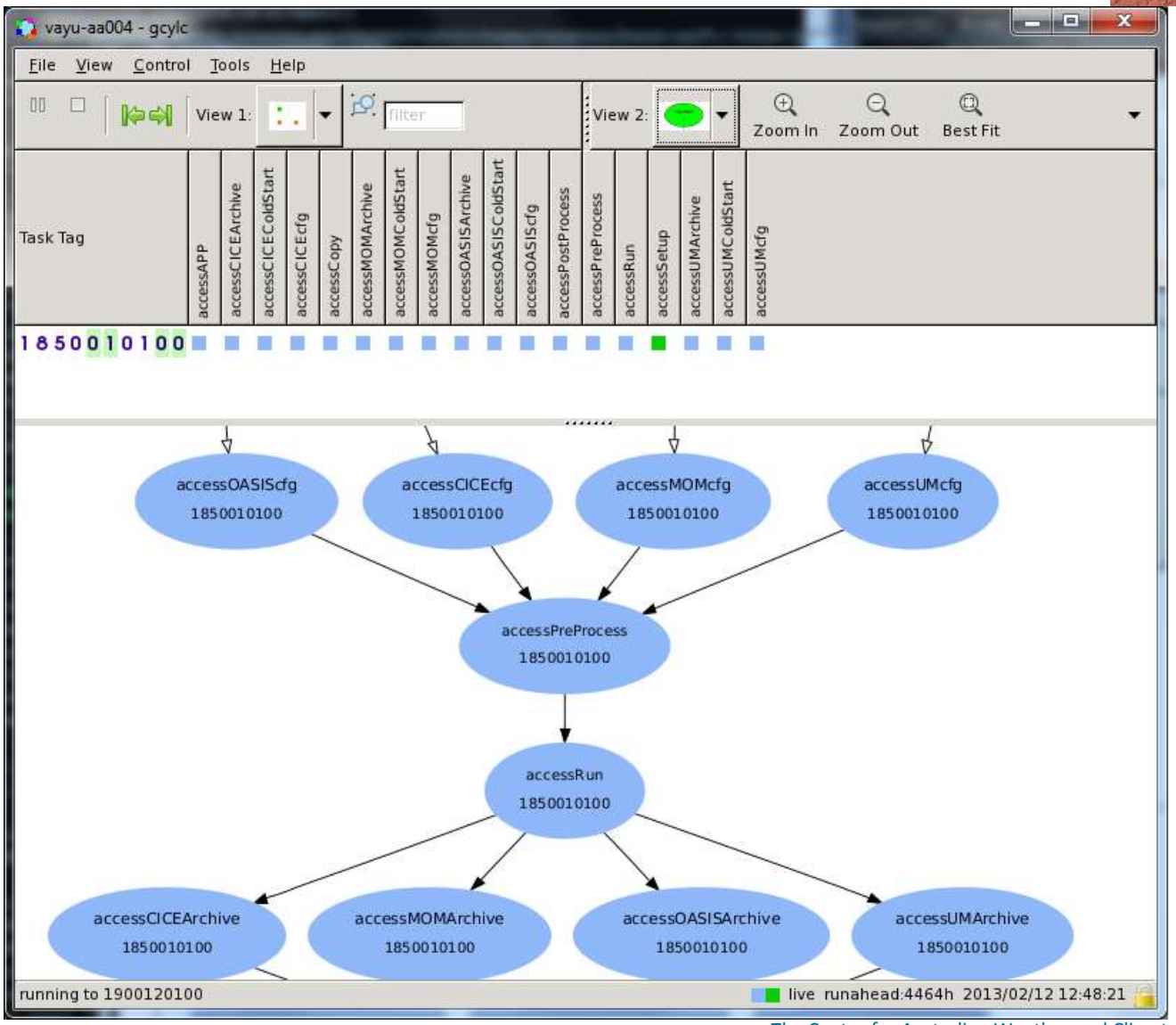
Index

- suite info
- suite conf
- accessCICEColdStart
- accessCICEcfg
- accessMOMColdStart
- accessMOMcfg
  - command
  - env
  - file
  - namelist
    - auscom_ice_nml
    - bg_diff_lat_dependence
    - data_override_nml
    - diag_manager_nml
    - fms_io_nml
    - fms_nml
    - mom_oasis3_interface_
    - ocean_adv_vel_diag_nn
    - ocean_advection_veloc
    - ocean_barotropic_nml

auscom_ice_nml

Mstress	5.0
Tmelt	-1.0
aice_cutoff	0.15
do_ice_once	false
dt_cpl	3600
fixmeltT	false
frazil_factor	1.0
iceform_adj_salt	false
icemlt_factor	1.0
ige	341
igs	328
ire2	328
irs2	325
kmxice	1

Coupled model UI: cylc run



UMUI & post-processing

- Say working on making UMUI work with rose for job submission, rosie for storing basis files
- Peter working on integrating CMIP5 post-processing into model runs
  - Considering use of IRIS
  - Still problems with getting standard names and other metadata for all variables

NWP transition

- APS2 global (N512) candidate running on vayu, controlled by cylc (Xiao)
- APS1 city systems running on vayu, controlled by cylc or SMS (Wenming)

IRIS

- New Met Office analysis and visualisation package (python based)
  - Uses matplotlib but includes own basemap replacement
- Now installed on vayu
- Promising but still has gaps
  - Can be a big haphazard on merging fields to 3 and 4D variables
  - No variable grid support
  - Incomplete mapping of STASH codes to standard names
- Developers are quick to respond

Issues

- accessdev and raijin delays
- Raijin and solar2 transitions at the same time

- No real progress on data and integration yet

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Thank you

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