



NCAS

Unified Model Introduction

Part 5: Rose and the UM

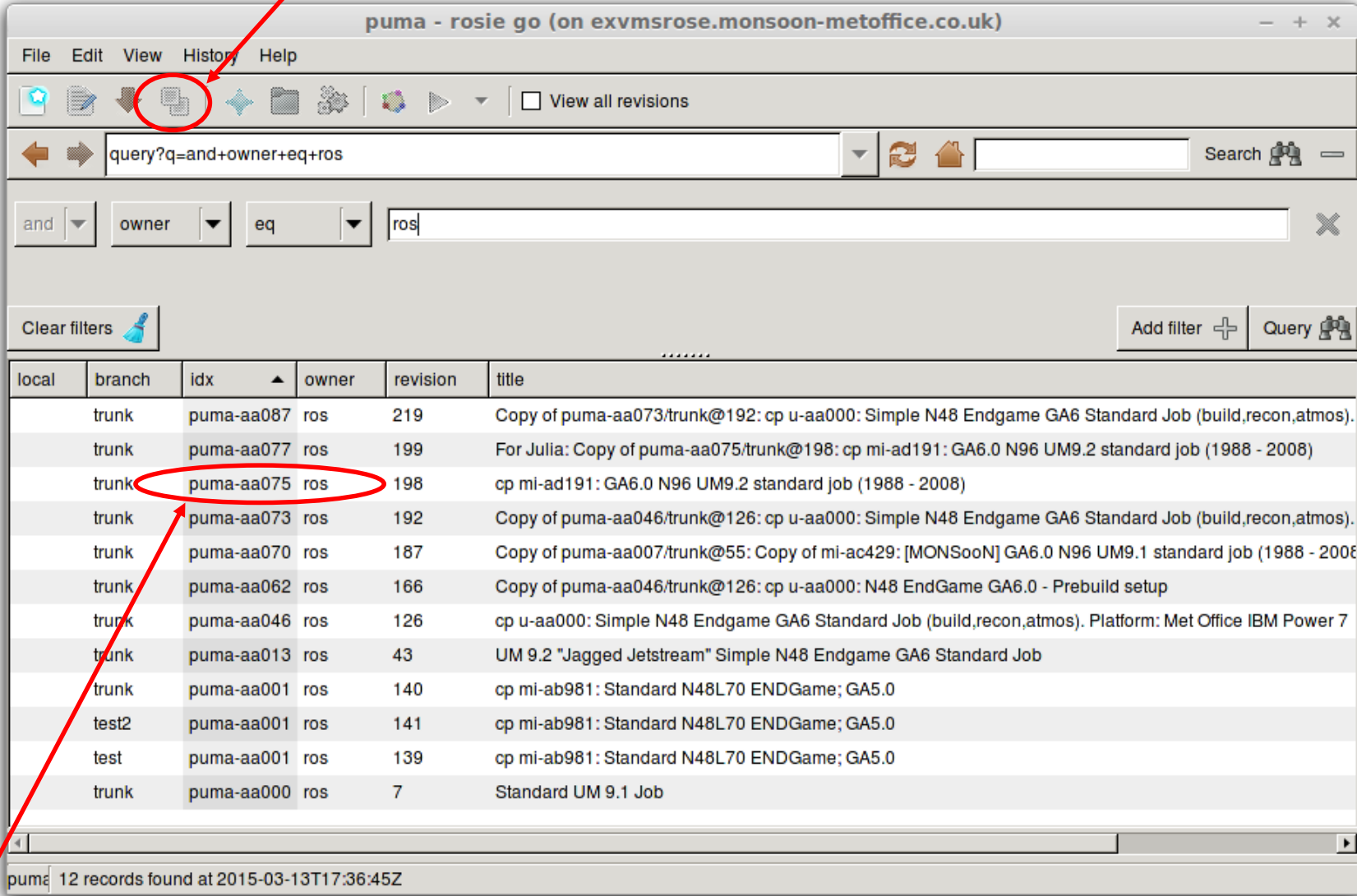
University of Reading, 16-18 December 2015

- Rose is a replacement for the UMUI from version 9.0 onwards.
 - “Jobs” are replaced by “suites”
 - Suites are under version control (using FCM)
 - There are tools for viewing, editing and controlling suites
- Cylc controls job submission and scheduling.
 - This simplifies complex workflows and cyclical suites.

Rose suites are held in a repository either locally (e.g. puma) or on the MOSRS ('u').

- Suite-ids are prefixed with the repository name:
e.g. puma-aa003, u-aa003
- There is a suite repository viewer (like the UMUI):
rosie go
- You can copy, create and checkout suites via the GUI or command-line tools:
rosie create/copy/checkout

Click to copy a suite



query?q=and+owner+eq+ros

and owner eq ros

local	branch	idx	owner	revision	title
	trunk	puma-aa087	ros	219	Copy of puma-aa073/trunk@192: cp u-aa000: Simple N48 Endgame GA6 Standard Job (build,recon,atmos).
	trunk	puma-aa077	ros	199	For Julia: Copy of puma-aa075/trunk@198: cp mi-ad191: GA6.0 N96 UM9.2 standard job (1988 - 2008)
	trunk	puma-aa075	ros	198	cp mi-ad191: GA6.0 N96 UM9.2 standard job (1988 - 2008)
	trunk	puma-aa073	ros	192	Copy of puma-aa046/trunk@126: cp u-aa000: Simple N48 Endgame GA6 Standard Job (build,recon,atmos).
	trunk	puma-aa070	ros	187	Copy of puma-aa007/trunk@55: Copy of mi-ac429: [MONSooN] GA6.0 N96 UM9.1 standard job (1988 - 2008)
	trunk	puma-aa062	ros	166	Copy of puma-aa046/trunk@126: cp u-aa000: N48 EndGame GA6.0 - Prebuild setup
	trunk	puma-aa046	ros	126	cp u-aa000: Simple N48 Endgame GA6 Standard Job (build,recon,atmos). Platform: Met Office IBM Power 7
	trunk	puma-aa013	ros	43	UM 9.2 "Jagged Jetstream" Simple N48 Endgame GA6 Standard Job
	trunk	puma-aa001	ros	140	cp mi-ab981: Standard N48L70 ENDGame; GA5.0
	test2	puma-aa001	ros	141	cp mi-ab981: Standard N48L70 ENDGame; GA5.0
	test	puma-aa001	ros	139	cp mi-ab981: Standard N48L70 ENDGame; GA5.0
	trunk	puma-aa000	ros	7	Standard UM 9.1 Job

12 records found at 2015-03-13T17:36:45Z

Double-click to check-out and edit or run a suite

You can open and edit suites through the Rose editor:

- Scientific settings are similar to the UMUI.
- Metadata provides information and consistency checking.

You can also edit the files directly:

- Checked-out suites live in a directory:
\$HOME/roses/<suite-id>/
- Use FCM commands to save your changes

puma-aa087 - rose config-edit (on exvmsrose.monsoon-metoffice.co.uk)

File Edit View Metadata Tools Page Help

Click to run the suite

um Shortwave x

run_radiation: Options specific to SW (solar) radiation.

i_sw_radstep_perday_prog 24
Number of times per day for full SW radiation calls

a_sw_seg_size 80
Segment size for SW

h_swbands 6
Number of SW bands

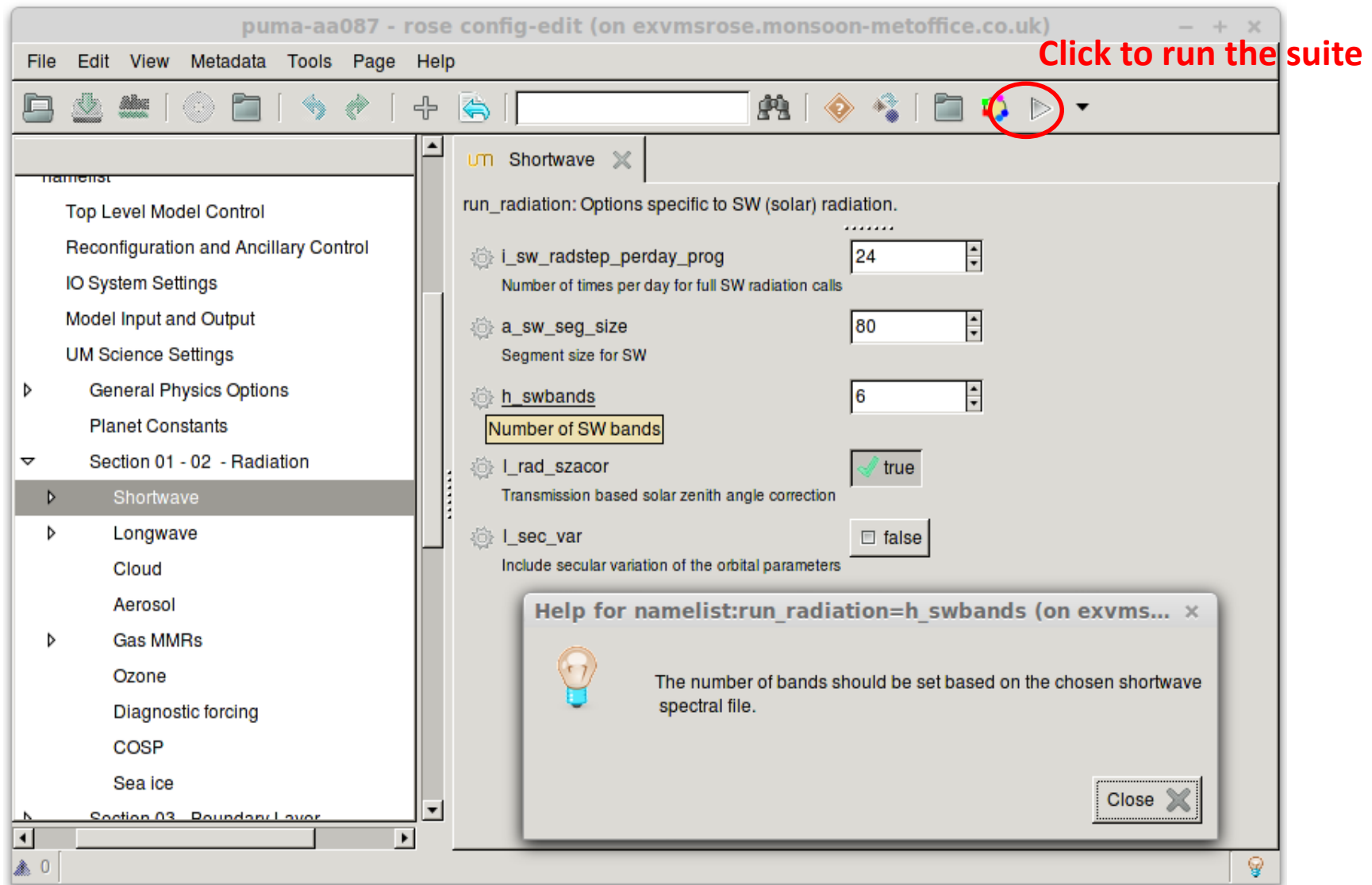
l_rad_szacor true
Transmission based solar zenith angle correction

l_sec_var false
Include secular variation of the orbital parameters

Help for namelist:run_radiation=h_swbands (on exvms... x)

The number of bands should be set based on the chosen shortwave spectral file.

Close x



You can run a suite from the GUI or command-line:

- `rose suite-run`

This launches a progress monitor GUI (gcylc):

- From here you can view log files, stop and re-start runs.
- You can close this without affecting the run. To re-launch:
 - `rose suite-gcontrol`

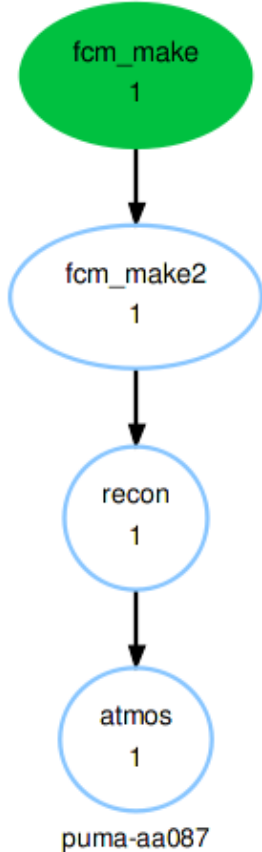
Suite control GUI

puma-aa087 - exvmscylc - gcylc (on exvmsrose.monsoon-metoffice.co.uk)


File View Control Suite Help

View 1: running failed... + - 🔍 View 2: 🔍 🔍 🔍 🔍 🔍 🔍

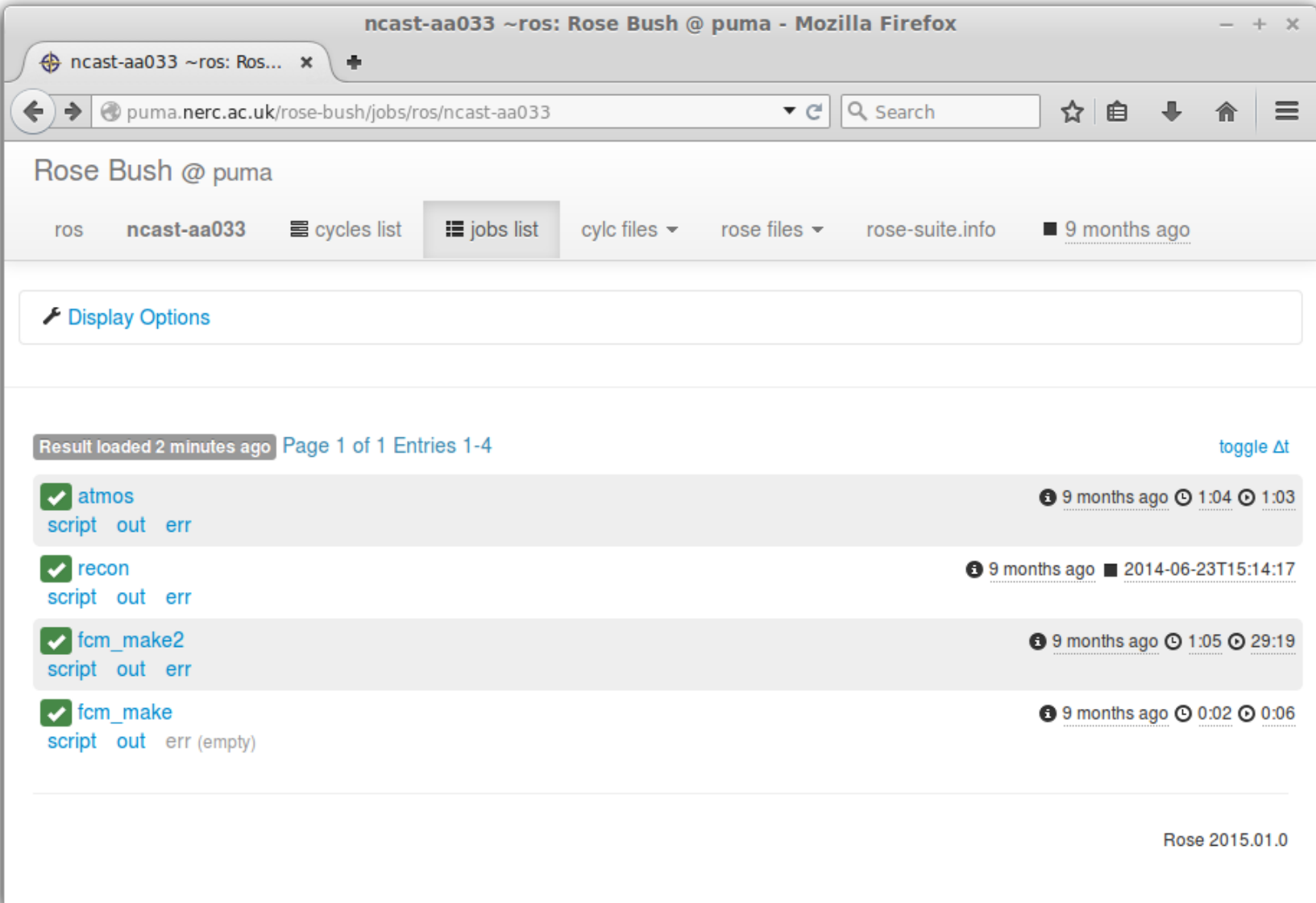
task	state	host	job system	job ID	T-submit	T-start	T-finish
1	running						
<input checked="" type="checkbox"/> fcm_make	running	exvmsrose.at		519	17:59:34Z	17:59:35Z	*
<input type="checkbox"/> fcm_make2	waiting	*	*	*	*	*	*
<input type="checkbox"/> recon	waiting	*	*	*	*	*	*
<input type="checkbox"/> atmos	waiting	*	*	*	*	*	*



waiting held queued ready submitted submit-failed
submit-retry running succeeded failed retrying

running to 1 live 2015-03-13T17:59:36Z 

- UM output data lives on the HPC and has (mostly) the same format as previously:
\$DATADIR/cylc-run/<suite-id>/work/<cycle>/atmos/
- Log files (equivalent to leave files) are copied to puma, and can be accessed through Rose bush:
<http://puma.nerc.ac.uk/rose-bush>
 - Note this currently doesn't work on MONSooN.
 - Log files can also be viewed directly from:
cylc-run/<suite-id>/log/



ncast-aa033 ~ros: Rose Bush @ puma - Mozilla Firefox

ncast-aa033 ~ros: Ros... x

puma.nerc.ac.uk/rose-bush/jobs/ros/ncast-aa033

Rose Bush @ puma

ros ncast-aa033 cycles list jobs list cylc files rose files rose-suite.info 9 months ago

Display Options

Result loaded 2 minutes ago Page 1 of 1 Entries 1-4 toggle Δ

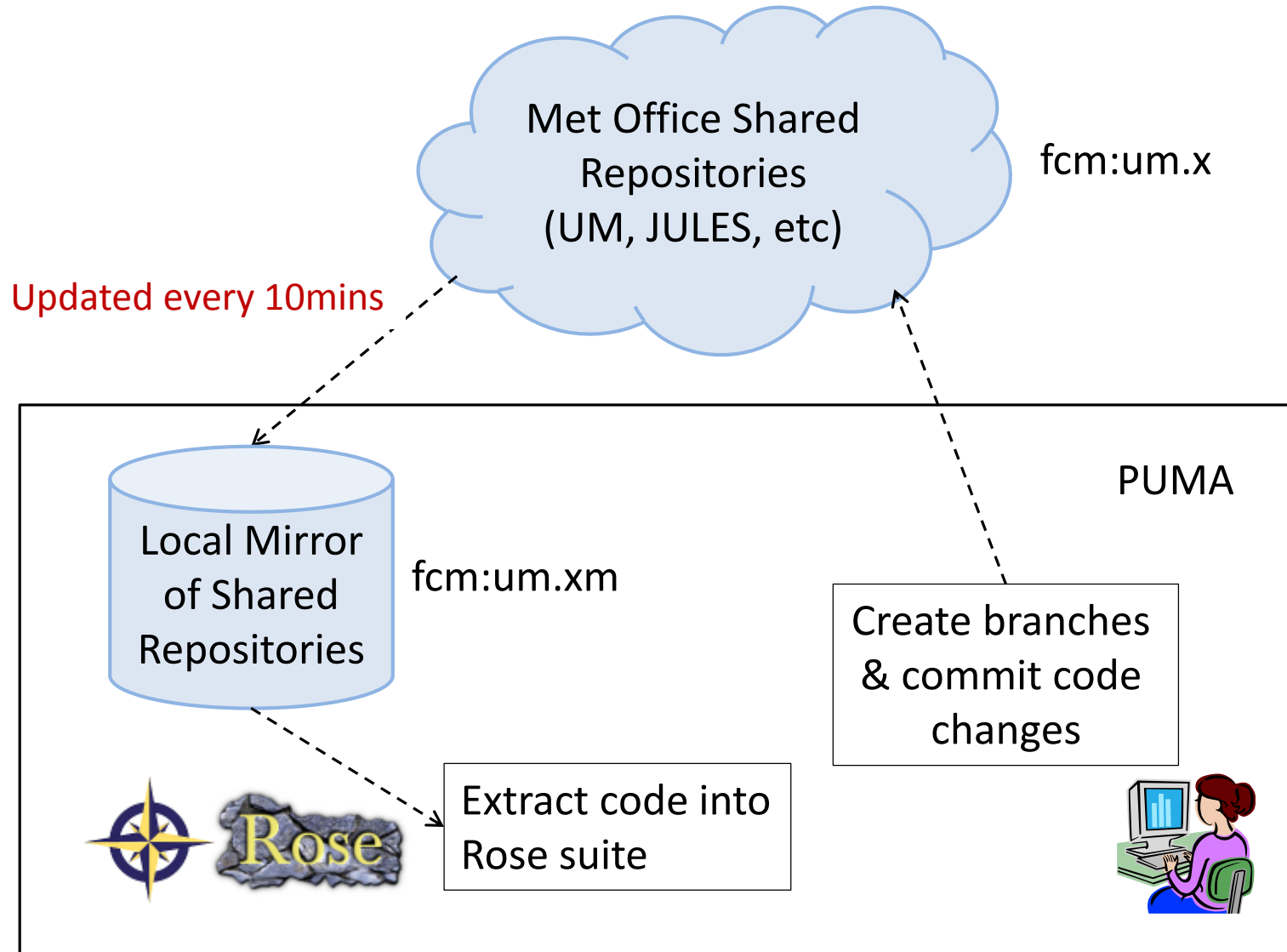
✓ atmos	script out err	9 months ago 1:04 1:03
✓ recon	script out err	9 months ago 2014-06-23T15:14:17
✓ fcm_make2	script out err	9 months ago 1:05 29:19
✓ fcm_make	script out err (empty)	9 months ago 0:02 0:06

Rose 2015.01.0



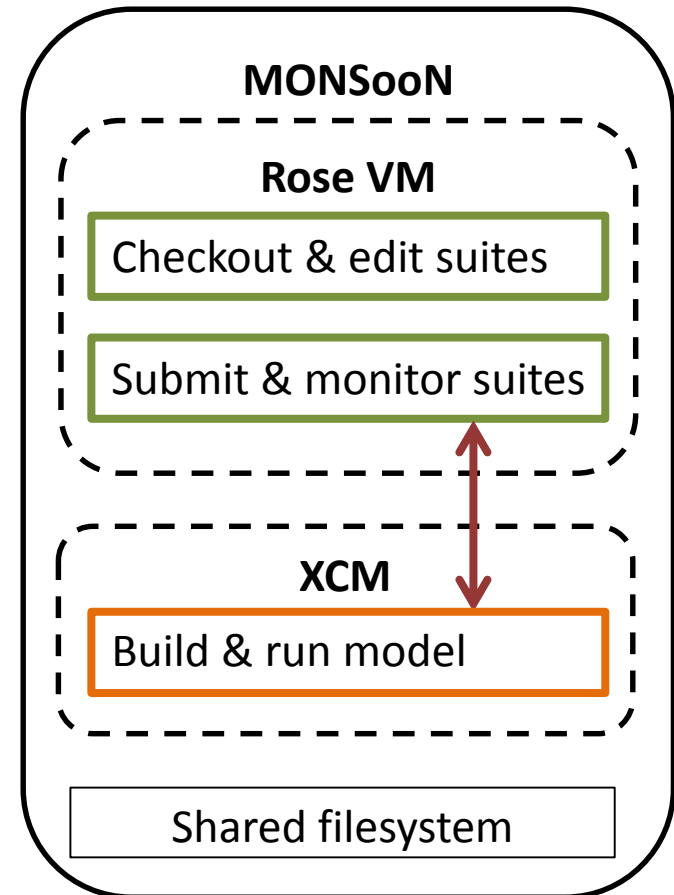
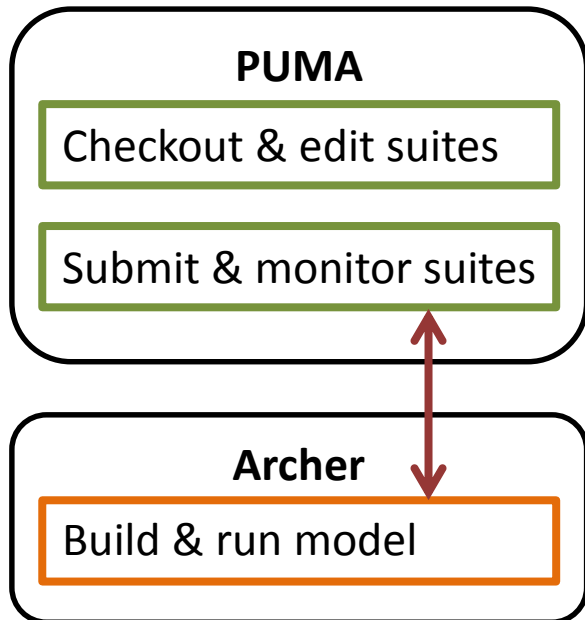
- From vn10.0 the UM code is located on the Met Office Science Repository Service:
<https://code.metoffice.gov.uk>
- This service hosts other Met Office codes (e.g. JULES, GCOM) and collaborative projects (e.g. GA, GL, GO and GSI).
- Access must be requested via NCAS-CMS.

Interaction with PUMA



UM versions 10.0 to 10.3 are available on Archer and MONSooN.

- Archer suites are submitted via PUMA.
- MONSooN suites are submitted via the Rose VM.





Follow the instructions on the CMS webpage:

<http://cms.ncas.ac.uk/wiki/RoseCylc>

1. Register for a MOSRS account by emailing:

cms-support@ncas.ac.uk

2. Carefully follow the instructions for caching your password.

3. Follow the Rose set up instructions for MONSooN or Archer.

4. Work through the UM Rose tutorial.



For details of Rose commands and the syntax of configuration files, see the documentation:

<http://metomi.github.io/rose/doc/rose.html>

<http://cylc.github.io/cylc/html/single/cug-html.html>

For more information on the command line tools (for fcm, rose and cylc) use 'help', e.g.:

```
$ rose help suite-run
```

If you are going to be developing suites, work through the Rose tutorials in the documentation.