WURM, 05-02-2024 13:00 WURMng Oort room

Present Bob, Aard, Mark, Des, Wybren, Paul, Marjolein

Plenary session:
MT meeting this Wed in my agenda so bring up items (all: JIVE GM Sep
and Dec only?!) (after the meeting: Marjo's calendar does not
update; MT meeting is actually *Tue*).
e-VLBI tomorrow (Tue), Wed, and ToO-run-in-eVLBI on Thu; latter is
MPC at different band, starts clock search at 05:00 UT
Investigated Proton mail/calendar/shared storage (+VPN), all
encrypted, using open source + standard protocols = 6k€ / 2yr for 50
persons (having 50% edu discount).
vlcoffee organised tomorrow - see many of you there.

Paul: abstract radio stars conf @Haystack accepted as poster. Have
been changing IP addresses to create more space in subnets to be
able to decommission old HP switch; found external DNS issues (dns1
= master, syncs to dns2 (both internal) then to SURFnet takes ~ a
day, possibly b/c of dns <-> dns messages held back by fw? Upgrade
of archive: feature list created for future migrations, see BobE.
Redmine edits for supporting strategy WURMs. DAT drives failing:
installed PCIe card in Mk5#4, connected drive, worked for a bit,
verify status and if dead start scouting Marktplaats/eBay.

Des: stopped update of PpaersDB so supp sci can classify; tomorrow
vlcoffee. fringefit crash on MacOS: crash caused by ungraceful GSL
error handling - now graceful (cherrypicked patch found on the
interwebs) i.e. no crash no more but underlying prob still unknown.
Many meetings; RADIOBLOCKS T5.1: EPFL (Swiss partner) doing Big Data
in Astronomy, inspecting/developing format: they'll meet with NRAO
on this topic, fortunately everyone seems to gravitate towards
xarrray/xradio; EPFL working with IanH from S Africa; someone using
lua on top of dask-ms (i.e. MSv2, xradio = MSv4): may salvage the
Dask bits from that system. Request to review document by MarkK;
also get request to review some code. Currently trying to combine >
1 spectral window in xarray.

Aard: SNR in MPC solved, then start recorrelation of observations,
found performance issue: (known) buffer size problem so implemented
"auto" option (code was long able to predict required buffer size
but never used that knowledge). Mail from JackR: bright source near
edge of FoV corrupts visibilities; Q: can subtract model in
correlator? Probably not the right place to do it but dusty old
baseline-dependent averaging (IniyanN) might be used to limit FoV of
correlator. Now getting sfxc output out of GPU corr; j2ms2
complains. Upcoming eVLBI 16 MHz vs 64 MHz subbands w/ e-Merlin
outstations = making them 2 Gbps stations; 12 stations total, 17
Gbps, ops folk need to make sure to start the right (buffersize)
version. [MarkK: test that setup beforehand] => Aard, BobE: to
arrange test today or tomorrow morning (Tue clock search start at
14:00 UT).

Wybren: trying to get HDDs into "sleep" (power save mode); SAS disks

didn't wake up; auto-sleep setting on HDD does not work; let the O/S
do it seems to be only/best way although zfs complains: takes *just*
a bit too long for disks to wake up . Rolling out upgrades, helping
Paul and Bob; this week upgrade evn-monitor.

Mark: RADIOBLOCKS deliverables (2x), on accelerators and data
transport; both on ASTRON): helped, finished, polishing them up,
hope to have them on coordinator's desk next week. Grace vsn of sfxc
(ARM64); committed option to support ARM performance lib (indeed is
faster); have local storage so can correlate: binary numbers are a
bit different (as with different CPU, to be expected); tested half
precision (16-bit float) now getting NaNs in output. Had CASA VLBI
mtng, now EOP branch which needs verification and ultimately
integration.

Bob: multi-facility proposal tool w/ selection of facilities mostly
done, next up is PDF writer + validator for testing >= two
facilities. Q: how about the different bits of support for the ORP-
PILOT instance? User- and tech support needed – tech is obvious but
what about the rest? [Action Marjo to check with RobB and DanD].
Archive migration: attempt to archive, find that from eee no access
to db1; user restricted to @10.88.0.* (discuss below). Handled a few
EVN Northstar questions re 1 Feb deadline.

Marjolein: jplotter user reported regression #FAIL: symbol scaling
does not work anymore? After investigation: old behaviour was
'accidental' that it worked, then kapotgerepareerd, meaning users
would have to add (as yet undocumented) commands to get scaled
symbols. Old default behaviour "properly" re-introduced in git
version. Will discuss eee tool maintenance in tomorrow's vlcoffee.

Deeper discussions:

BobE: db access – can we move to a coherent setup? db0: xxx@10.%.%.
%; db1 xxx@10.88.0.%
[PaulB: should we go back to one db? Some tools have SQL server
version dependency – almost need db2 by now ... but why db0 access
set so wide?] [Access from desktops for testin']
[Discussion follows]
Outcomes:
– fix db1 config for now so current tools "just work"
– migrate archive2
– then migrate db0 databases to db1 and wait for screams
  (DesS, WybrenB already spent lot of time on investigating
  and fixing probs of migration to db1)
– future: finer grained / tool-based db users; bit more work for
  the DBA but should be managable

Wybren: HDD standby: prefer HDD self low-power mode but only mode is
switch disk off => takes a bit too long so zfs marks them faulty/
issues error, but after scrub no data is lost/all is OK (but this is
not workable). Could make zfs timeout longer but then probably takes

longer for disks to get marked #FAIL that are physically failing.
[Marjolein: any idea of scale of power savings?]
20%/30% on 36 HDD machine if disks suspended (e.g. aribox —100 W
(400 W => 300 W approx; trantor2 340 W => 180 W)
[MarkK: probably O/S and hw do not support whole machine suspend
alas, could do that + WoL otherwise]

AardK: subracting sources in correlator vs baseline dependent
averaging. Need really good model to subtract and requires two
correlations: one to be able to calibrate and generate correct
source model, then again to subract it before MPC generation and
suppress (bright) sources. Could dust off old baseline dependent
averaging code?
[Marjolein: maybe interesting for EVNCam proposal]