

ZWURM, 22-03-2021 15:00 (ZWURM through Zoom because of #COVID19 house quarantine/wk54)

Present eBob, Aard, Paul, Ilse, Mark, Des, Harro

General: This is the last Monday in March 2021 where the ZWURM will be at 15:00; starting next week (29/03/2021) the meeting will be back at 14:00. Please check your calendar app to see it is up-to-date.

Ilse: Attended SKA science meeting, all talks pre-recorded, no automatic switching to new talk: user own responsibility to switch at appropriate time - lost first few minutes on many presentations; pre-recorded format led to much less discussion, except for VLBI splinter session where talks were given live. Participated in a Stakeholder Engagement workshop hosted by ASTRON's RobertoP, focus on communication techniques. NAEIC symposium on Deaf/hard-of-hearing, was a bit US centric (speaker: JasonN from Rochester Institute of Tech. - US of A); takes a lot of effort to involve D/h-o-h into STEM and if anything made it clear that in .NL nothing is happening on this subject. EHT took up lot of time, press release later this week w/ JIVE involvement. Late time request to provide annual rep input, reviewing two EHT papers (unplanned). Managed to experiment a little bit with TOPCAT and simple ADQL queries, hope to be able to explore pyvo this week and attend "future of meetings" meeting. The diversity workshops for all JIVE staff will be held this week, requiring some attention.

Aard: Found dedispersion code broken, diagnosed: found deadlock, fixed; whilst at it noticed mixed bandwidth doesn't work with dedispersion, possible fix currently under test/debugging. Another Jupyterlab issue popped up, breaking everything: procedure is prepare image, pull in dependencies using pip, build CASA image, go into image, run pip to pull in other dependencies for tools to be incorporated in image => pip cannot resolve conflicting dependencies! Docker issues: eee-dev used host-based network so public host has all ports exposed, run docker bridged mode, difficult to make work > 1 image sharing ports; could access ports despite firewall: found that bridge mode bypasses Linux firewall! Plan to work on Jupyterlab V0 plugin, sfxc2mark4. Q[Paul]: what flavour of certificate needed for Jupyterlab/Docker? PEM? Chained? Root? A[Aard]: ah, did not know about this, will look into that.

eBob: Fixed bug in transfer-per-station code found after changing over: test system not 100% coverage so will update it; fb5 lost whole pool, Paul will explain later. Because of the fb5 issue all transfers halted, good moment to do e-VLBI stresstest w/ fb12 for recorded+correlated streams - but what is required from the test? [Mark] How many 2 Gbps streams can be handled on one flexbuff [Paul] measures HDD write performance, CPU usage, MEM usage, in that priority. Spent time exploring NorthStar fixes for usage stats/KPIs - e.g. institute selection box, grid.ac has 100k entries, 3 MB page load, so would have to move to server-side completion but NorthStar uses Struts v1 which has no documentation and also has already been

deprecated for ~decade, dragging in jQuery could work but not guaranteed will work, let alone that e.g. ASTRON is listed as "Netherlands Institute for etc." so users might not find own institute in (official) list. [Mark] Use own manually maintained/curated shorter list and keep up to date.

Paul: Monday morning 02:22 power outage, 4:30 back on Dwingeloo; MartinL responded at night, this morning both MartinL and PaulB in office to execute phased switching back on. Issues: some sfxc nodes powered on before head.sfxc booted; fb's still hang in boot or do not find all zpools (all fixable but nuisance); zfs on out.sfxc missed a pool; casadev did not boot, the three new SSDs in fstab and "mount /data" ok but not at boot, took time fixing since CentOS does this (a lot) different than e.g. Ubuntu/Debian; frb machine still two gateways, dug in: "network manager" (desktop app!) still installed & running, removed it, taking Gnu desktop environment with it; some machines came back up at power back up, should not happen: check BIOS setting or BIOS battery dead, all fixed. The cl0/cl1 VM cluster and switches are on UPS and remained alive, cl2/3 were not, but no production services running there so no problem. One casualty: Mk5#2 PSU dead, Mk5#4 remains iffy – had new PSU installed after previous power outage. fb5 lost whole pool because two disks died at same time in same pool (suspicious: same time), after power off/on seem ok, now scrubbing and will check SMART status when done; one fb had SAS replacement disk installed in stead of SATA, get SMART warning every 15min, will install proper HDD. Ran fb9 network test – clearly issue with fb9 packet loss. Will install optical power reducer in WR test setup in basement to allow testing, discussing server room upgrade, IPMI for new servers: have ticket with vendor but no-one knows anything. Together with AlexanderN discussing actual "vlbisysmon" machine setup.

Mark: Reworked sfxc output node state machine: bands now accumulated in parallel but still written in old/predictable order. Check at next e-VLBI if positive effect (but expect #FAIL in mult.phs.ctr. mode). If no measurable effect maybe explore out-of-order writing but may affect downstream tooling. (Or if support writing visibilities to socket, cannot sort anyway). The CASA5 build worked, can now design/add unittests. Security team meeting: policy of least privilege will be designed, e.g. staff doing only Office work do not get Admin rights; ASTRON would like list of functions that require more privileges. EHT meetings; software & data compatibility, mostly not relevant but two interesting topics 1) Debian has time-tagged snapshots of repo 2) docker modification to behave like Singularity (including all pros & cons of that).