

ZWURM, 11-01-2021 14:00 (ZWURM through Zoom because of #COVID19 house quarantine/wk44)

Present eBob, Aard, Paul, Ilse, Mark, Harro
Des was excused but sent in a report (see below)

Paul: Handled the tcpdump part of Effelsberg split stream test (more by eBob/Mark). Network issue emerged whilst KVM servers were being installed/added to the network: change bond ports -> network breaks. Cumulus 4 software should fix; we're on 3.7, upgrade not possible but only full reinstall. Maybe add ASTRON 100Gbps this Wednesday, pending KlaasS/JulianK availability and ok, otherwise postpone until after e-VLBI. Q[Mark]: CAN HAS EXTERNAL IP FOR V0 SERVER? KTHX!

eBob: Worked on ANTAB editor documentation, now in Markdown and on code.jive.eu; sent mail to supp.sci. but no responses yet. Completed one ToDo from the NorthStar list: checkbox "reviewed" proposals (this state never used); next up: dependency between observing band and integration time. Performed Effelsberg FiLa10G split data stream test manually, where FiLa10G issues erroneous/too short packet soon after start data; reproducible: 2 x 1 Gbps = FiLa10G stops sending data (so receiver ignoring erroneous packet approach won't work), 2 x 512 Mbps seems to work. [Mark]: packet ethernet header seems ok, IP+UDP headers consistent but too small value, although also frames where ethernet size smaller; VDIIF headers seem OK, no fill pattern in erroneous packet. [Paul]: next time should check with ILT/LOFAR before transferring 2-4 Gbps.

Ilse: First meeting of EAS Special Session SOC last week, will make initial programme soon. Meeting EHT ombudspanel vs EHT board, access to documents given w/o fight, can now continue. Beta version of notebook with new experiment/data: fall into own trap, select "scan 0" of which there isn't any. Suffered from network issue. Start EHT notebook for calibration comparison, might serve as basis for AIPS/CASA comparison since EHT folks sometimes have different, more useful, approach. MichaelJ will defend thesis this Wed. At next vlcoffee (before next ZWURM) will discuss notebook (mail already sent and initial discussion started).

Aard: Operators complained about slow exp: investigation reveals hyperthreading set to "ON" on subset of cluster nodes so will schedule two sfxc processes on one physical core = very slow. Produced Jupyter image with plotcalng in it; making it into a module revealed more of the finer import issues from Python/casa. Jupyterlab released v3 over Christmas, breaks all dependencies; most fixed only nbdime (version control for notebook) doesn't: project is aware, ticket already made. ESCAPE IAM in Jupyterhub: added login button -> click -> internal server error w/o further info; internet sais "downgrade Tornado to previous vsn" but also that next version has this issue fixed (sigh).

Mark: experienced issues with DSL at home; too many errors, got repairman in: diconnect/connect cables and nothing else and now line is ok again. ParselTongue 3.0 release done and announced on

mailinglist, including anaconda Linux+MacOS versions (takes hours updating and working on new build issues). Pondering lin → circ polarization conversion in CASA, not sure how to best to it since will remain hack – would be good if hack is good/clean enough to be allowed into official CASA. Helped with Effelsberg split datastream test. Most important ticket (automatic gain curve from FITS → MeasurementSet) verified and validated, so better than average chance this will end up in CASA6.2. The ParselTongue bug reported by PaulB was not really a bug: AIPS interprets 4 char string "INDE" (from "INDEFINITE") as REAL*4 value for NaN (old FORTRAN is not IEEE compat, i.e. doesn't know about NaN); unfortunately "INDE" results in a valid REAL*4 (float) value so doing computations with that value and calibrating data means weird/erroneous results. Might need to start using software what is IEEE compliant.

Harro: integrated EdH VEX1.5/2 compat parser into local version and j2ms2; does not parse our VEX1.5 (\$THREADS section not a token) and gives error in loading source names for a scan when using the access methods from the vex library. Need to investigate locally before pushing upstream to overcommitted EdH; merge back in \$THREADS support to be able to keep on supporting our legacy vex files.

Des[submitted digitally]: Tested the plotms facility for plotting fringeFit parameters, works well enough but NRAO added an option to plot dispersive delay as TEC instead (no one asked for this), and promptly broke it. Worked on RoboZsolt Paper-Assessing tool, which is (as these things are) a fairly horrible mix of CGI scripts and DB queries; unsure if fancy JavaScript would make input validation better; plan to have this into a workable state (modulo gross UI) for assessment by ZsoltP for feedback. Checked memory usage issue in FringeFit in CASA: there is hope; the Very Big Array is actually only used for the Hessian, which is (only) used in the SNR calculation: good chance that (a) can fix this without affecting the rest of the code, and (b) that this was the problem.