

ZWURM, 03-08-2020 14:00 (WURM through Zoom because of #COVID19 house quarantine/wk21)

Present eBob, Mark, Paul, Aard, Harro

Paul: services2 VirtualMachine ready, Des&Mark migrated their data, now waiting for final test before switching. Added 100TB storage to jop83. ZFS auto snapshot backups made to work for "backup", "marcopolo" onto "trantor"; an incremental diff is sent. Works ok but load on trantor increased. Current 1Gbps link to trantor is limiting factor. ASTRON not fan of coupling to 10Gbps link (fear of own capacity), investigating dark fiber into JIVE switch. Motherboard (including IPMI) + CPU replacement being selected. ASTRON 100Gbps switches installed but the included optics turned out to be incompatible. Some disks were replaced and noticed that the old(er) sfxc nodes are basically not used (except k,l nodes sometimes) [will ask operations group why this is, otherwise shut down?]. "code.jive.eu" certificate, IPv4 and DNS arranged, found reverse DNS broken. Happens between JIVE/SURF, under investigation. EB070 was recorrelated so new data to process. Reinout Boekhorst (proposal tool maintainer) is leaving ASTRON, so should pump him for info and passwords before he's gone.

eBob: datastreams now in production runjob! [follow up: ask for access to a station's FiLa10G to test on the hardware]. worked on optimizing pySCHED, profiling reveals most time in Py <-> FORTRAN memory translations; made some changes: consumption down to 50% from 66% runtime, and have ideas of more possible optimizations. Wrote e-VLBI manual for the operators, waiting for comment. Started investigating backupscripts - some diffs in administration between the different systems. [MarkK: these drives typically require a minimum speed so maybe do look at backup software. If drives fed too slow/too many small jobs, tape stop/starts which is detrimental to lifetime of device].

Aard: Jupyter plugin improving but javascript and API restrictions currently holding back progress; some functionality (directory listing, creating directories) either not in API or may need to be moved to server backend. Even then dealing with permissions is a big hurdle. The ringing in FRB spectrum (compared to DSPSR) was traced to most likely the branch using a broen channel averaging method. This is pre SFXC4.0, currently merging into 4.0 branch [but 5.0 already released as well]. Decided to prioritize moving this branch into production to prevent even further diverging between code branches.

Mark: 4Gbps local tests: phasecal extract must be off, 12 x 4 Gbps real-time not unachievable. Some hangs observed [Aard: socket becomes unwriteable]. Maybe have to add extra debug info since not sure exactly what's causing this. There may be room for improving performance of channel extractor. CASA polconvert application: one calibration w/ complex number for amplitude/phase correction but must also rotate with non-commutative matrix. Calibration not yet in CASA, could be implemented simply but non-commutativity implies

calibration must be done at correct moment. Will discuss with GeorgeM whether generic or specialized/hidden method should be implemented. Attended ESCAPE WP3 workshop on open source lifecycle (and contributed two talks); interesting talks. "software heritage" idea: DOIs do not guarantee retrievability, this project indexes files on e.g. github and stores hashes. Now versions can be regenerated based on the hashes. Day on licences, not new to Mark but interesting for non-illuminati. Wrote code to add correlator model (totals) to FITS-IDI as IM table.