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PILOT 2 UPDATE

Status

- The main development stage ended in September
 - In principle all main features have been added
 - Minor development remain in order to test Pilot 2 with aRC via Harvester
 - Some development remain with traces
 - Few additional error codes remain to be implemented
- The commissioning stage has begun
 - Currently this means HammerCloud testing
 - Multiple HC templates have been created and run on several queues
 - A few PQ clones have been created for comparison between Pilot 1 and 2 (only used for HC jobs so far)
 - Harvester testing has also begun (at BNL-PROD), using HC jobs
 - Started dedicated HC tests for containers (at MANC)
 - Until now a job submitter cron has been used

Most recent news

- Error recognitions
 - Most of the more critical error codes now in place (a handful remains)
- User containers
 - Successful tests with realistic user job (previously only Hello World)
 - runcontainer script added to panda-wnscrip repo
- Detection of outbound connections
 - Actual detection done by tracer script run by runGen/Athena
 - Pilot scans for presence of special log file
 - Currently only reports to log
 - Discovered that current mechanism stopped working due to incompatibility with IPV6
 - Tadashi updated tracer script earlier today
 - Same mechanism could be implemented in runcontainer script used with user containers for activity monitoring
 - Pilot can fail job if connection made to non-allowed URL
- Now building log extracts
 - With tail of payload stdout, grep of fatal/critical pilot errors
 - Sent with final server update

Yoda-Droid and Pilots

- Yoda-Droid is a Pilot-like application but is currently not using the PanDA Pilot API
 - There are several code overlaps, e.g. payload treatment/processing/communication layer with Harvester, so it will be beneficial to eventually house it in the PanDA Pilot
- Details are to be worked out
 - At least initially, Yoda-Droid can continue to be run like they are run now, with some code imports from Pilot 2
 - In the longer run, the entire Yoda-Droid will be merged with the Pilot where it will run as a dedicated and streamlined Yoda-Droid workflow (which is not using any code not relevant to it)
 - Doug Benjamin (currently responsible for Yoda/Droid) coming to CERN in November to discuss planning and get started
- We expect to have a new developer sometime next year who can help with this task

Next steps

- Finish error code handling
- Extend standard HC tests further – **THIS WEEK**
 - 1. Short individual PQ tests (on a few PQs, compare Pilot 1 and 2)
 - 2. Longer individual PQ tests (on a few PQs, compare Pilot 1 and 2)
 - 3. Expand PQ list
- Extend HC container tests – **THIS WEEK**
 - 1. Individual PQ test (MANC)
 - 2. Expand to remaining container test sites (pilots+HC template)
- Test with real jobs on a few PQs – **~END OF THIS MONTH**
 - PQ_1 (Pilot 1) vs PQ_2 (Pilot 2)