D0 Grid Production Computing Initiative Coordination Meeting

18 March 2008
V1.1, Post-Meeting Edition, RDK
Attending: RDK, AL, GG, PM, QL

Outline

- Incomplete Tasks – 4 slides of task chains
  - No status feedback
- Major Milestones
  - No known progress
- Operations Ticket meetings
  - 17 March: Adam posted a report (thanks)
- D0 Top 5 Items Status
  - No report last week since no status update
- Close-out plan
  - Next Meeting: 15 April 2008 (same time and place)

D0GPCI: Task Chains 1

- **Operations Policy Doc**
  - V1.1: Adds remote site services, config mgmt, node recovery
  - AL was to complete by now. Final review was to be done by now. This WEEK, Please!

- **Track Migration of AADST (B Group) data to SAM**
  - Total files to transfer understood to be ~2000. Turns out to be much more.
  - AL: 240910 files are in SAM. Yes, >240k. _Believed to be done_. Will mark this as closed.

- **OSG Forwarding Node Re-installations**
  - Fwd Node 3 Re-installed and being tested. To Do: put Fwd Node 3 in production
    - 04 March: Jobs submitted to fwdNode3 still remain idle with what appears to be a globus gatekeeper error establishing handshake with samgrid
    - 18 March: TODO Reinstall samgfwd03 from scratch and try to reproduce perl problem.
      - Yet another version of perl showed up via UPS (current) but not in repository. Not sure how. Ups bootstrap?
    - Installation procedure not robust enough? Worked for Parag when done exactly as written.
    - Very sensitive to version of perl that the VDT installation picks up as the one to use. 64 bit issue too.
  - Condor patches to be added soon. These are Condor fixes not yet in VDT
    - 04 March: Requires a Condor restart? Suggest Steve consult with Steve Timm on this.
    - 18 March: Furloughs between the two Steve's in past two weeks, so no overlap.
    - How to prevent patches in samgrid_patches product are not applied to wrong VDT?
  - Afterwards: Drain, remove old fwd node 3 (d0srv66). Issues:
    - Legacy NFS service of client tools, something to investigate.
    - Move context server, check merge job dedication in production config vs. old config
    - Then can use the node for a role in the Grid test stand (beyond v1.0 config, not part of Initiative)

D0GPCI: Task Chains 2

- LCG Forwarding Node Re-installations (LCG/Wuppertal, LCG/UK)
  - RDK: Closed as incomplete.
  - REX/Ops can treat when supported nodes are up. The Initiative monthly follow-ups will check on whether progress is being made on CD side after the appearance of a modern supported node for this role (hence bullet still here).
  - Lancaster has a machine up. REX/Ops looking into getting it setup, support level

- SAM-Grid Test Stand
  - D0srv15, 47 Fwd Nodes installed, being tested.
  - Old samgrid disk fix has been requested
    - *FIXED.*
  - Config V1 = 1 Fwd Node + 1 Submission/Queuing Node + test jobs running.
    - More nodes, services, and monitoring will be added *later* (post-Init)

- Automation of Repetitive Ops Tasks
  - Blocking on PM leave
  - Fwd Nodes have automation in samgrid_util
    - d0srv66 left as is since samgfwd03 should in place soon.
    - If samgfwd03 is still delayed, does it make sense to install automation on d0srv66 now?
  - Queuing Node: work was in progress
    - Automation software in CVS, new product not yet cut – PM
      - SS will clean up queues manually if not, until PM returns.
    - Then deployment, and enabled in crontabs - SS

D0GPCI: Task Chains 3

- Adjust Tool Responsibilities
  - Blocking on PM leave
  - 2.7.1   Generalization of Job Types according to I/O Characteristics: execution side
    - Two stereotypes being supported in this version: Reco,Sim
    - Last report before PM leave: in testing
  - 2.7.2   Resolve how to add production paths in future: Document
    - This is a major D0 Request deliverable. Will track to completion.
  - 4.3.4.7   Forward user's job scheduler requirements to sites: execution side (happens to be same area of code change)... ReSS Alternative.
    - Written, in test now.
  - Runjob changes required for Generalization of Job Types.
    - "Globus rsl parameter changes for Mike are released as test version for Samgrid_batch_adapter and jim_Client. This will need new runjob since the changes are made to new wrapper reco script that has new macro."

  - PM on leave from 2/21 – 3/14. He is back as of 3/17.

  - Concern about D0Runjob
    - Involved in an serious ops issue involving intermediate files going to tape
    - A critical piece of at least one open Task Chain in Initiative
    - Additional help from French institution did not really come into play.
    - Documentation: another area perceived as needed additional expert effort
    - Was established test/deployment procedure followed? Can procedure be improved?
      - Expected a production environment test (not real data) before production deployment... Did it happen?
      - Ultimately, responsibility of D0 Offline to oversee this. We can make recommendations though.

D0GPCI: Task Chains 4

- **Primary Production**
  - CAB web monitoring – Jason Allen
    - Data collection part done
    - RDK to ask: The group was to be working on data presentation part now.

  - ReSS alt: Forward user's job scheduler req.s to sites (see Task Chains 4)
    - Blocking on PM leave

  - Smaller tasks: Jim/D0Runjob release version, Access by MD to files on CAB
    - Mike has a work-around for some of this, has not had time to test working without it.
    - 18 March: Mike is on furlough.

- **Tracking Developer Effort Reduction**
  - Reduced Issues frequency&complexity, but watch developer effort on operations
  - 2x reduction in issues, 3-4x reduction in major issues from Aug '07 to Jan '08
  - Consistent with Mike and Joel's overall impression. Still room for improvement.
  - Follow-up:
    - Would be useful to be able to categorize sources of issues quickly and track.
    - Track developer effort reported to operations work – reducing, but not by 2x yet.
      - RDK will track in Follow-ups. Effort level should drop after Initiative ops-related tasks.

Major Milestones
(no change at this level in 2 weeks)

- July 2007 – February 15, 2008 --- Initiative End
  - **MILEs 1-12, 16-19, 21-22: DONE**
  - *MILE 14: D0repro tools uses Sam v7 request system*

- Late February 2008
  - **MILE 24-25: DONE**

- March 2008 --- Initiative Doc, Open Tasks
  - MILE 15: OSG Fwd nodes reinstalled with std config
    - Fwd Node 3 h/w fix, re-install, drain/remove old node.
  - MILE 13: Operations Policies doc
    - Add remote site services, config mgmt, node recovery

- Late March 2008 --- Initiative Wind-down
  - MILE 28: D0 Primary Production Stable on Fermigrid
    - Two MD tasks, CAB Web work by FEF, MILE 15.
    - Will mark as dependent on ReSS alternative (oversight)
  - MILE 20: How to add production paths in future resolved
    - PM dev work plus documentation (a D0 Request)
    - Non-trivial amount of work required to get into Production
  - MILE 26: Achieve arch-defined responsibilities among tools
    - Blocking on MILE 20

- Late March 2008 --- Initiative Wind-down
  - MILE 23: Routine maintenance operations automated
    - Blocked on PM work: Queuing Node auto-clean, backup alarm server, non-rotating log clean-up, etc.
  - MILE 27: Close-out of Ops Reduction/Transfer completed
    - Blocking on MILE 23
    - *Close LCG Fwd Node Re-install as incomplete*

- April 2008 --- Initiative COMPLETELY done.
  - MILE 29: Initiative completed (~ April 2, 2008)

- 21/29 Major Milestones closed. Remaining 8:
  - 1 documentation tasks underway, near completion
  - 1 is operations task chain, held up by hardware repair and now proceeding and expected to complete soon
  - 2 near completion delayed by critical resource on leave
  - 1 dev task + write-up. Critical resource on leave
  - 3 are Summary tasks blocking on other Milestones

- Done, Near Completion, Underway, At Risk, *Closed-Incomplete,* Summary of preceding MILEs.

- (*) indicates a recent change

D0GPCI: Ticket Meetings

- 10 March 2008 Meeting – No meeting… Adam + Andrew discussion.

- 17 March 2008 Meeting: See summary at

  http://d0db-prd.fnal.gov/~sam/rexipedia/lyon/samGridTicketMtg-20080317.html

  - **AL: "Action items**
    - TODO Complete the SAM group change.   [NEXT TUESDAY]
      - Note that we'll need quota for dzero on all SAMGrid stations...
    - TODO Need to install NGOP agents for samgfwd02 and 3 as secondaries...
      - [RDK: a task in Initiative... 3.5.5.17]
    - TODO Update NGOP configuration
      - Need to update NGOP configuration for samgfwd02 and 3. Also update to remove nodes greyed out on the NGOP display. Also need to add the new fcp queues (touch the dcron installation to get the agents up).
    - TODO Change the PERODIC_EXPR_INTERVAL
      - Change the condor schedd configuration for 24 hour interval. Tell Gabriele so he can release a new jim_broker_client.
    - TODO Cleanup jobs on all forwarding nodes
      - Cleanup old globus-job-manager processes.
    - TODO Write a script to automatically catch old globus-job-managers
      - The script should log actions so we can watch how often this problem occurs.
    - TODO Look into Globus 121 error with Parag
    - TODO Reinstall samgfwd03 from scratch and try to reproduce perl problem"

- Ticket Meeting Past Issues:

  - LCG Fwd Node Issues at Wuppertal – see earlier slides

  - Unmerged files to tape instead of durable locations – confirmed tied to D0Runjob. Fixed. (confirmed)

  - Hitting 32k sub-directory ext3 file system limit on queuing node

- Open Tasks:

  - Write-up due on Globus error 42 issue (AL)

D0GPCI: Close-Out

- Detailed Close-out Schedule as best as known
    - Coordination Meeting: March18. Project Plan (schedule) v1.4.5.
    - Follow-ups led by RDK: **8 April, 6/13 May, 10/17 June** (usual time/place)
        - Schedule updates to track progress
        - Did open tasks get completed? Are processes in place still being used? Long-term aspects of Initiative topics? Consulting?
    - D0 Management to initiate next meeting with Initiative and CD Mgmt
        - D0 Mgmt conferring with CPB on Initiative, but also involved in collaboration meeting
        - No word back yet.
    - Formal Close-out Tasks
        - 8.5.6   Project Objectives Close-out Document – RDK
        - 8.5.1   Project Close-out Meeting
            - After OSG Fwd Nodes Re-install and Ops Policy doc completed.
        - 8.5.2   Project Close-out Report – RDK
        - 8.5.3   Project Close-out Report Approval: D0 rep, CD rep
        - 8.5.4   Archive project artifacts
            - RDK to plone. RDK: collect docs, format into D0 Tech Note with help from Adam
        - 8.5.7   Project Close-out Informal Celebration/Get-together
            - Suggestion: a late Friday afternoon at Users Center
        - This will likely not start until early to mid-April, due to rate of progress.