

Experience and tools for Site Commissioning

Why the discussion

- Mid-way check 6 months (plus August) into Commissioning Project
- Chance for critical look and define priorities for work in next months
- Commissioning not involved in CSA07 operations (besides helping sites to join along the way) what will we do ?

Commissioning Activities

- Site commissioning:
 - Bringing new sites in
 - Site Availability Monitoring
 - Site Exercise (Job Robot)
- Links commissioning
 - dedicated discussion
- Middleware Integration
 - Job Submission scaling
 - Job Priorities
 - FTS v2 and FTS topology
 - SRM v2
 - LCG/OSG interoperability

Bringing in new sites

- Most sites were in already 😊
 - Joined gradually as tools were developed/deployed
- New ones will be “really new”
 - And may want to ramp up fast”
- Is it clear what is needed ?
- Do we need a “documentation” effort ?
 - Requires some site admin cooperation

SAM

- See ad-hoc discussion
- How to evolve into a ever more useful site monitor tool ?
- Need to understand why availability is not higher, in spite of very simple tests
- CMS SAM availability may be lower then WLCG one
 - Long standing issue with scheduled downtime
 - Not sure it can really explain what we see
 - Homework for each site

Job Robot

- Running two robots since spring
 - JobRobot, from FNAL machine, using SB credentials
 - Low rate, stable configuration, makes summary web pages
 - TestRobot, from CERN, credentials from SB, then Enzo Miccio
 - Only visible in dashboard. Higher rate using gLite WMS, Submission Scaling exercise
 - With recent CRAB and gLite a single Robot is enough (25 used in CSA07) but still requires ~intensive babysitting
 - Is it worth to keep doing ? Is almost the only analysis
- Amazingly difficult to get data to read at the sites
 - Number of jobs now limited by small dataset (900 events!)
 - Will have to stick with very short jobs (few min) until CSA07 brings some “resident” data at your sites
 - Good test of CE/LRMS : same load larger farm with longer jobs
- Number of job failures still higher then desired

Job Robot Recent additions

- Crab job I/O rate now available on dashboard (new look, bugs fixed)
 - Would really like to run some I/O bound job (>30ev)
- Submission rate scaled up to week-long 20K/day (same as Production), up to 30K now
- Moving from CMSSW 1_4_3 to 1_4_6
 - JR requires all sites to be the same, update limited by last sites to upgrade
- More info from CMSSW errors
 - ERROR CMSSW CMSSW_1_4_3 not found on td229.pic.es
- Error type summary plots

Job Robot Coming Features

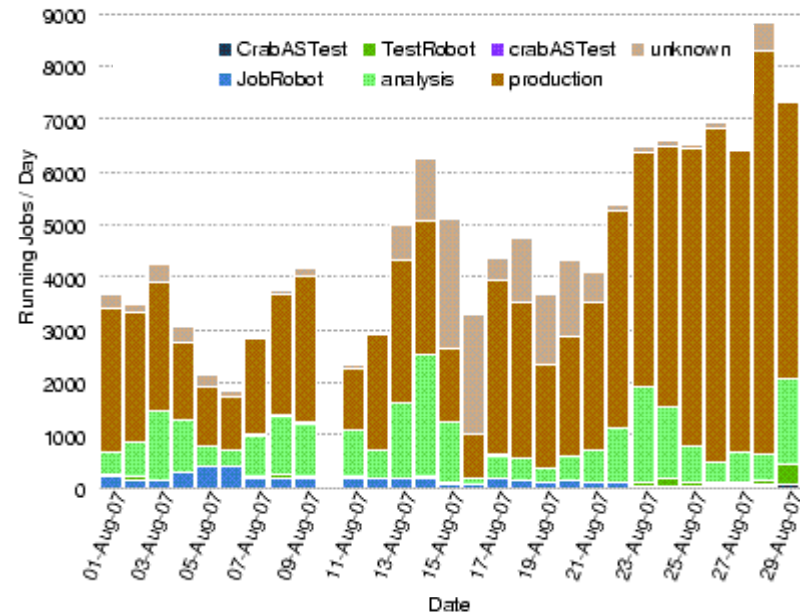
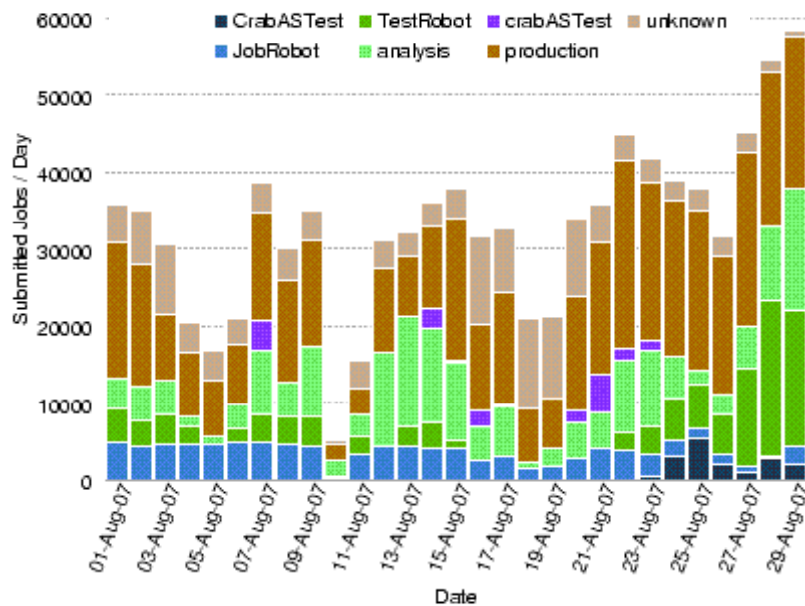
- More jobs to more sites 😊
- More smartly parsed CMSSW and loggingInfo headline in error report
 - Also on dashboard
- Faster posting of tarballs ?
- Instant web repositories for logs ?
- Longer running jobs ?
- Some Frontier-using job ?

Job Robot Q

- Useful to Commissioning
- Is it useful to you ?
- How do you like Marcelo's web summaries/plots ?
- What more/less/other would you like ?
- Anybody looking at I/O rates ?
- How can we make it easier for you to figure out what the problem is w/o waiting for my answer to your mail ? (and viceversa)

Middleware not involving sites

- Job Submission scaling seems under control
 - Condor-G and/or gLite WMS fit the need
 - Tests have been transparent to sites



Middleware not involving sites

- LCG/OSG interoperability
 - Full transparency for job submission
 - Some question on published information passing to be addressed by Commissioning

Middleware affecting you

- New CE: need experiment testing after Grid certification
 - will certainly need site cooperation here (working with CNAF now for CREAM)
- Job Priorities
 - Will tackle again “VoView” (in PPS now). Site cooperation needed
- FTS 2
 - “commissioned” by Facilities and PhEDEx Ops: thanks
 - Deployment issue: T1-* channels, channel clouds
- SRM v2 is for this fall, we need guidance from T1’s on what the important features (for CMS) are
 - SRM gives access to MSS features
 - Which features are available and should be used and how is for MSS experts to say

FTS channel topology

- T0-T1 dedicated channels hosted at CERN's FTS for both directions
- T1-T1 dedicated channels hosted at FTS server at destination
- T1-T1 is a dedicated channel, so it matters little where > the FTS server is. What matters is (e.g. because of your 1.) > that admins at both ends of the channel agree on the > configurations. Trial and (even severe) error in finding > the config. is OK, but in steady state operation I think > this is a highly immaterial debate. > Best is that site admins at the two ends of a dedicated > channel are BOTH given control AND keep anyhow in contact > when problem arise and actions are needed/taken. > > So said, I propose we cut the knot with sticking to > WLCG "standard" and T1-T1 channels are served by the > FTS server at destination. Yes Mario, this means that > PhEDEx can not use "FTS server down" to notice that > source side is down, but for sure it will notice that > data aint' coming, so I guess we can wait to see > how it goes in practice. > >
- T1-T2: channels hosted at T1 involved in transfer
 - Dedicated channels for some T2
 - T1-Start for the rest
 - Next also set of T1-<group of sites>
- Quite different is T2-T1, where one channel serves many > sites and T1 needs to make proper compromises forcing > the group to the maximum common denominator. > Here's were "site clouds" will help. > > Cheers > Stefano

My assessment of our experience

- SAM mostly done, but final cleaning up requires energy
- JobRobot also a tool for Job Submission scalability (WMS and CE), never ending ?
 - should also become more similar to Production activities
 - Use Frontier and same CMSSW versions
- Focus on daily site checking softened with time
- We know catch (and usually manage to fix quickly) all problems that completely break a site
- Hunting the “15% of jobs aborted/failed” is next
 - Need more tools: monitoring, reporting and also a lot of crossing the user/site barrier: you do not see my logs, I do not see yours
- Middleware integration is smoothly going on

Summary of Questions for debate

- Site manual
- More SAM tests
- Increase SAM availability
- More/different JobRobot
- Access to local monitoring
- JobPriorities
- FTS2: what is commissioning role
- SRM v2: which tokens
- How did you like it ? How can we better help ?
- What would you like/need that I did not think of ?