A Large Ion Collider Experiment

European Organisation for Nuclear Research

ALICE

AliEn²
@GRID

AliEn status report

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Infrastructure

- New catalogue machine
  - SSDs → performance significantly boosted
  - Soon similar move on TaskQueue

- Updated MySQL version based on system (Costin)
  - Very few changes to [j]AliEn
  - Changes on some behaviours
    - Timeouts, config items, backup method ignored, even readline usage…

- Updated LDAP version based on system
  - Replication mechanism also updated
    - From slurpd to syncrepl
  - Quite some changes in config

+ New || Fixed

- TLS communications
    - Authen's configured and running (rest ASAP)
        - After patch in AliEn

- Sending batch job parameters to MonaLisa
    - Helpful for site admins to debug jobs, linking queueId with batchId

- Pending: using latest as default AliEn version
    - apparently wrong env set
        - With libgfortran as red herring? under debug…
            - Some ideas in this sense: deleting the libraries folder (x86_64…) coming from build (is not there in classic AliEn installation); use alien-installer;
                - system gfortran should be used anyway
        - Then, will need to be debugged on the real setup…
    - As said in T1/T2 workshop:
        - New OpenSSL, Apache, MySQL, libs, …

+ New || Fixed

- Perl defuncts on WNs
  - Fixed, verified by sites
    - And about security: no more vulnerabilities reports means no vulnerabilities [found]…?

- Some DB queries optimized
  - Job & Catalogue quotas

- Stopping jobs with missing packages
  - Comparison AliEn vs CVMFS
    - See later slide about PackMan

- Brokers issue (~mid June)
  - 2 problems at once: job with wrong (long, repeated) set of packages led to discover length of packages column for JOBAGENT was not enough in some cases
    - painful debug session, brokers missfunctioning, slow+bad matching!

+ New || Fixed

- Job TTLs required to be <= 24h

- Big traces (from catalogue creation failure) default off

- ClusterMonitor startup
  - Recreation of httpd/conf automatically
    - Renaming old to httpd/conf.<timestamp>
    - Can be avoided touching '$ALIEN_HOME/httpd/keep'
  - Checking if previously running, proper kill
  - Storing reliable PID to stop/start
    - Was failing in some cases…

+ Optimizers

- Job optimizers probing+forking now works
  - DB handlers were in bad state after forking and reusing
    - First attempt: just create a new one per child
      - Not working smoothly
    - Second attempt: clone parent handler + flags
      - InactiveDestroy
  - No problem on forking and getting proper results since then!

- OCDB→CVMFS sync
  - Being done catching the files under OCDB folders
  - Failures in CVMFS caused unsync because of faulty publications
    - Using ssh script: will CVMFS provide an API ? Or a way to detect failures
      - We can parse output of the script even, though is not so nice
        - Any 'fail' or 'code' always coming back when failed that we can use ?
      - Or, if there is absolutely no way from CVMFS side, just adding more work for AliEn/Catalogue side ? E.g.: the process tries to stat the files published after ~2h and see if they are there…
   - What if not there ?

+ Optimizers

- We need more monitoring for the Optimizers
  - Right now, checked through the parent → not enough!
  - A possibility is to use PIDs of the processes and subprocesses and establish status and thresholds checks
    - Depending the type of optimizer
  - ML offers something that fits ? -> ApMon parameters + notifications from ML
    - Or AliEn itself, cronjob, or similar
    - jAliEn re-implementation

+ PackMan + Packages

- PackMan issues last week (ALICE week) and ongoing
    - Optimizer doing registration in the DB dies unexpectedly
        - Especifically doing find over /alice/packages
    - New API for publication coincides with start of problems
        - But no relation found so far…
        - In any case, the process should not die
    - Extra debug plus DB handler creation put in place as first approach

- In general, what do we want?
    - We have different list of packages in CVMFS and PackMan, they are not the same (the used ones I understand yes)…
    - Which has preference?
        - E.g.: ML doesn't allow submission if not visible in CVMFS. AliEn allows submission if existing in PackMan (all packages). Puts to error by an optimizer with a custom PackMan (CVMFS right now) after comparing availability of packages.
    - PackMan needed to keep flexibility (be able to register and run anything anywhere, as was done before)

+ Catalogue

- Catalogue load spikes (recent)
  - Coming from OCDB object finds from jobs
    - The TextCache usage practically stops
  - Fixed by splitting latest OCDB table
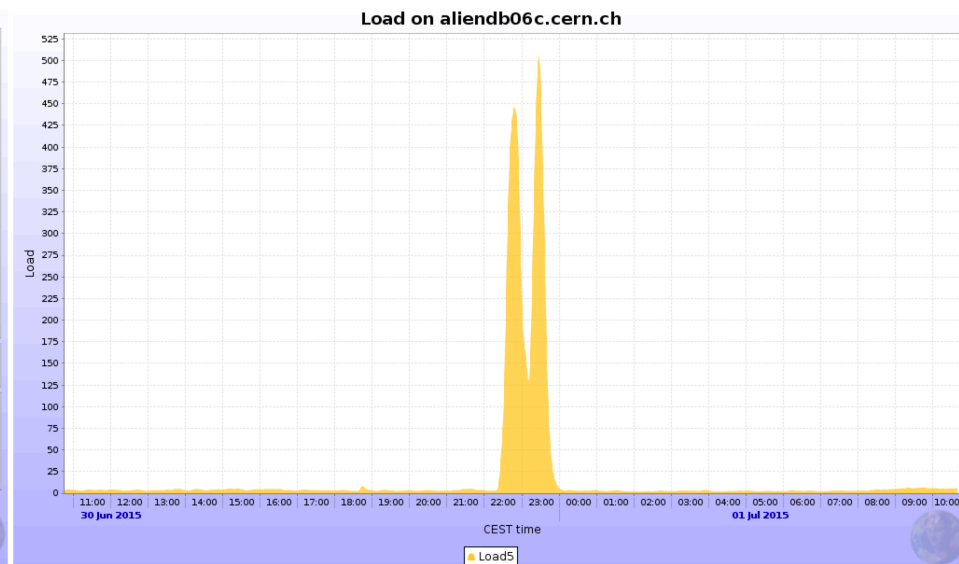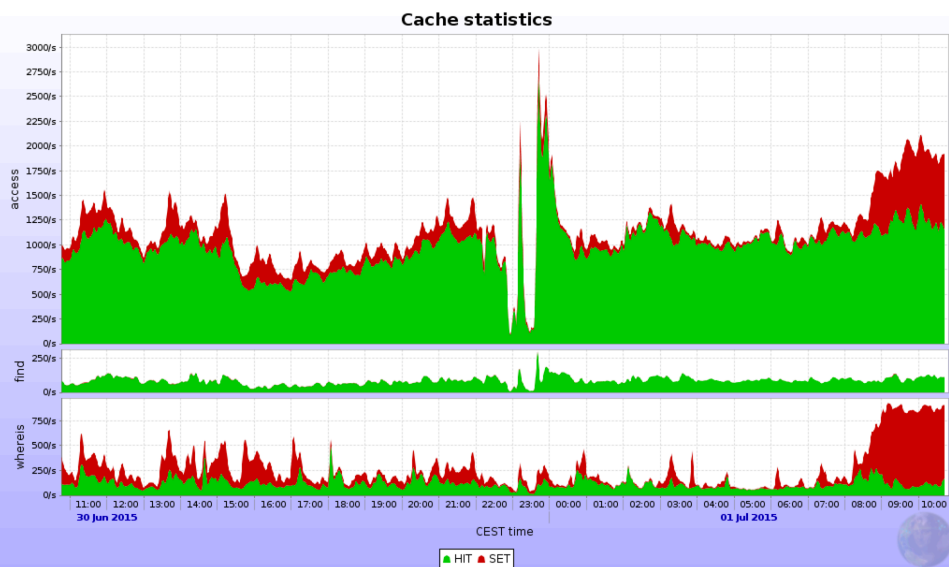
- Also lately jobs thrasing with too many queries (event loop?)
  - We need more capacity [and more control? E.g. call hz]

Operation in GSI

- Xrootd proxy working ok so far…
  - Few fixes/hacks
  - Going up to 1K jobs for now

Services status AliEn: v2-19.276	ClusterMonitor: **OK** PackMan: n/a CE: **OK** CE info: Max running jobs: 1000 Max queued jobs: 50	Proxies status	AliEn proxy: **OK** (1 day, 23:58) Delegated proxy: n/a (n/a) Proxy server: n/a (n/a) Proxy of the machine: n/a (n/a)		
Current jobs status	Assigned: 0 Running: **964** Saving: 7	**Accounting** (last 24h)	Success jobs: **2467** (profile) Error jobs: **221** + **4** expired kSI2k units: **2356** / pledged	**Site averages** (last 24h)	Active nodes: 308.9 Average kSI2k/node: 2.456

- SGE interface being completed+improved
  - Missing methods
    - To report proper status of the batch system

- Running in production partition now

+ EOS

- ORNL + Kolkata new sites
  - ORNL is functional (used within AliEn) but being customized
  - Kolkata had initial setup as test, still pending
    - Will have MGMs and FSTs together

- New eos-deploy
  - Can setup any combination of MGMs and FSTs

- New wiki with installation and configuration steps, testing and other notes
  - http://alien2.cern.ch/index.php?option=com_content&view=article&id=140&Itemid=144

+ Questions / Comments

- Record of 82K+ running jobs ☺

- We still miss a real test environment
  - Even more important now with more jAliEn dev
  - [partially] mirroring DBs + LDAP is an option

- Questions?

+ jAliEn (+Pavlo's talk)

- JobAgent
  - Implementation up to preparation for execution (30-40%?)
  - Payload will run in a new process
    - Easier and more precise to control than threads
    - More isolation
  - A JBox will run per JobAgent
    - Bidirectional communication

- Packages
  - PackMan basic interface + CVMFS implemented

- Broker (matching)
  - Job matching + site probing for submission ready