Operations Workshop Conclusions

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wLCG Collaboration workshop

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Outline

- Some successes of the past year

- Outstanding issues

- Priorities for the coming year

- Next workshops

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- **Improved release rollout**
  - Had been lots of complaints (communication, frequency of updates, config changes, planning)
  - Now: (efforts from both SA1 and SA3)
    - Regular updates of repository
    - Announce major changes at ops meeting
    - Announce critical updates with timeline for required updates by sites, otherwise sites do updates when they can
    - Documentation on releases has improved significantly
    - Announcements now have templates and people know where to look for information
    - Remaining issue: to clarify when reconfiguration of service is needed (developers now have to provide this info in Savannah before patch gets accepted)
- **PPS is mature and regular part of process**
  - But see issues …
- **Grid Operations is now becoming mature**
  - Procedures have evolved, interoperation with OSG main area of development

Enabling Grids for E-sciencE

- **Major problem:**
  - With the current state of gLite, SA1 is not able to provide and maintain compatibility with the physical deployment environment.
    - There is no port to SLC4 – let alone the promised other OS's
  - This means we cannot even maintain operations at our current sites as they need to upgrade their hardware
  - Seems to be due to the complexity of the gLite packages, interdependencies, external dependencies and consequent problems to build and port
    - This has been raised as an issue for years but nothing has been done about it

  EGEE management has agreed to allow effort to be devoted to addressing this issue: a plan is being constructed now

- **Pre-production service: Is it value for money?**
  - The PPS has been used:
    - During gLite-3.0 deployment/testing
    - For major changes (eg SLC4 testing)
    - By certain VOs (SWITCH, DILIGENT) as a main platform
  - But by and large it is not heavily used
    - Use is rather intermittent, and mainly for small tests – it cannot reproduce the environment and scale of the LCG VOs production environments
    - EIS team (and ATLAS) use to check that bugs are fixed
  - To make it available for when it is needed it has to be kept up to date
    - Weekly release cycle
    - Well maintained and good response from the sites involved
    - All of the sites involved have volunteered and want to participate (~20 sites)
  - Perhaps the scale can be reduced to be more appropriate for the actual usage?
  - Use more as extended deployment testbed / extended certification (with SA3)?
    - Cover major deployment scenarios
  - Or, can it be made more usable by, more useful to, the VOs?
    - Need NA4 to help us answer this

Enabling Grids for E-sciencE

- **Lack of management ability of grid services**
  - Remains a major issue for site and service managers
  - Very little has changed yet
- **Web site and information, &**
- **Resources for new VOs!**
  - See EGEE-3 discussion; this needs to be addressed by the resource owners

- **Preparation for LHC start-up**
  - This will be the main driving force behind how the infrastructure changes
  - Dress rehearsals start in June; expect accelerator start-up in November
  - Crucial that the infrastructure is ready, reliable, and stable
    - Must ensure that changes are not disruptive – probably even more important than new functionality
- **Middleware changes anticipated in deployment**
  - Migration to SLC4 + 64 bit support
  - SRMv2.2 support: In the Storage Elements, but also in the DM tools (GFAL, lcg-utils, FTS)
  - Move to the gLite WMS: but this is still not yet good enough to be deployed widely as a production service
  - Implementation and deployment of the gLite-CE
    - But this has its own problems – see slide
  - Replacement of gLiteIO/Fireman with LCF/GFAL (April?)
  - glexec provided as a tool – sites will decide how it can be used
  - Job priorities – following wg proposals

Enabling Grids for E-sciencE

Improvement of service reliability – also to respond to reviewers comments on understanding of the overall system and job failures

- **SAM – continue to develop – need to complete the set of tests**
    - Will publish availability/reliability of all sites (currently done for LCG Tier 1s)
- **Three working groups have been set up to focus on improving service and site reliability – all 3 are coordinated together**
    - Grid Monitoring
        - Pull together existing monitoring data, provide views for stakeholders
        - Not more development, but bringing together what exists, and fill in the gaps
        - Early deliverable – integrate remote monitors of a service into site fabric monitoring
    - Site Management
        - Set up through HEPiX, but relevant to all system admins.
        - Tools, best practices, recommendations, for improving site management
            - *E.g. recommend a set of tools to use for new sites*
    - System Analysis
        - Continue the work done by ARDA on experiment dashboards – but coordinated with the other groups
        - Provides a level of understanding from app p.o.v and can feedback to ops and other monitors
- **Need coordinated debugging with applications to find underlying failures – and fix them**

Key issues for sites

- Experiment keywords for 2007
  - **Stability, reliability, robustness, performance**
- Your site will be assessed as reliable/usable or not
- We need to ensure we understand failures:
  - You may get requests to analyse rapidly problems of the last day or so – pointed to by monitoring
  - Please take these requests seriously
- Big push in monitoring to improve site managers' life:
  - Feedback remote monitoring to local fabric monitors, etc.
- Ensure you communicate your operational issues:
  - To your ROC or equivalent; to the ops meeting; central WLCG team
- Review site practices:
  - Procedures, policies – are they adequate?
  - Is your local fabric monitoring adequate – what is missing?
  - How will your site manage unattended reliable running?
    - Procedures and staff for Call-out/stand-by duty
- Cosmic, calibration challenges, dress rehearsals, etc. start now, in addition to ongoing productions
  - This is already the wLCG service …

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