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WLCG Workshop Lisbon

Welcome & Introduction



Welcome

- ❑ Welcome to the WLCG workshop and welcome to Lisbon
- ❑ Thank you to the organisers for the work in setting up the meeting
- ❑ 2.5 days of discussion and brainstorming on the evolution of WLCG
- ❑ To be followed by a DPHEP workshop (Wed pm + Thursday)

Background

- ❑ Run 2 has started, time to review what is needed for the coming years (Run 2, Run3, Run 4)
 - Need to plan for LHCC review of the planning for computing in the Phase 2 upgrades
- ❑ Also need to document what we see as the main challenges and areas where we could benefit from external funding or collaboration
- ❑ Distinguish between 2 different goals and timescales
- ❑ Medium term:
 - Address for Run 2 (++) topics that could help achieve efficiencies, improvements, cost reductions etc → evolution of the existing models (many of the topics raised previously)
- ❑ Longer term:
 - Need a brainstorming and radical thinking for the HL-LHC timescale on potentially very different computing models and infrastructures

Day 1 topics – medium term

- Security and trust model
 - Trust VO's or users?
 - Traceability and reactivity vs “control”
- Software performance
 - Supporting HSF – but needs to be clear it is a key concern
- Compute:
 - Simple access to any resources: grid, cloud, HPC, volunteer, etc – what is minimal need?
 - Need for “CE”
 - Need for batch systems?
 - Volunteer computing service as mechanism for “small” sites
 - Cloud provisioning: interfaces and how to provision; commercial clouds as extensions of sites, stand-alone?
- Data:
 - Common set of data management tools?
 - What are key functionalities/use cases
 - A&A vs performance
 - Better use of disk – roles of Tiers
 - Consolidation of functions
 - Evolution of federated storage mechanisms
 - “Dropbox” functionality etc
- Networking.
 - Evolution of LHCOPN, LHCOne
 - Deployment of IPV6
 - Monitoring/performance
 - Evolving requirements
 - Need for advanced tools? Define why.

Topics ... (2)

- Monitoring and information systems
 - What are use cases now
 - Service discovery vs monitoring
 - Include reporting needs, e.g. accounting
 - SAM-like functionality still needed? What?
 - Dashboards – what?
- Accounting
 - Job vs client (need for clouds to validate billing)
 - Understand limitations and define strategy
- Benchmarking and performance monitoring
 - Benchmarking
 - In-job performance check

Day 2 (Tuesday)

- Longer term view – brainstorming and discussion on potential ideas for computing models
 - How can we significantly reduce the cost?
- Anticipate being reviewed on this by LHCC starting in 2016
 - Computing is important component of upgrade costs
 - LHCC want a timetable for checkpoints leading to full TDR by (e.g.) 2020
 - And something that will indicate possible cost envelopes
- For the long term
 - Gather ideas and document the major challenges and concerns
 - Sketch some strawman computing models for the future

Wednesday morning

- ❑ Try and summarise conclusions, areas of work, areas where we need R&D effort etc
- ❑ Agree next steps
- ❑ Set up working groups if needed
- ❑ Some time for additional discussions if needed