

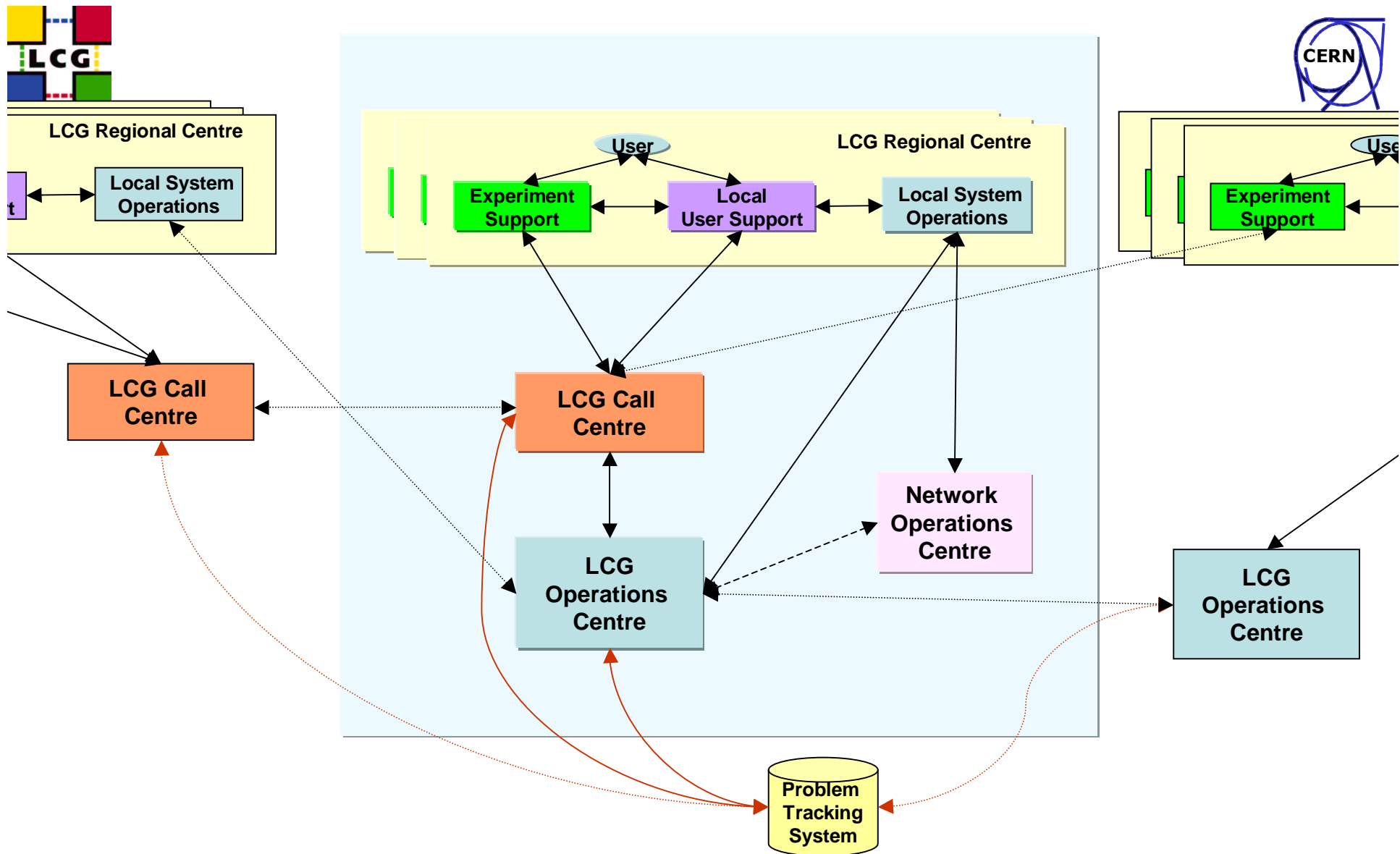


LCG Operations Centres

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GDB

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LCG Grid Operations and Support Lines of Communication



Responsibilities of the GOC



- The responsibilities of the GOC will include:
 - Monitoring of the status of grid infrastructure services
 - Monitoring of performance of the infrastructure – to include file transfer bandwidths, job throughput, etc.
 - Subsequent evolution of the GOC should address automated alarms to on-call personnel based on the monitored information.
 - Regular accounting reports (accumulating information from the individual sites)
 - Trouble determination and resolution
 - Interaction with network operations centres, LCG Call Centres (providing user support), Regional Centre grid system administrators and security officers,
 - Report problems to the Grid Deployment team
 - Coordination of security incident response (central clearing house and contact point)
 - Trouble ticket system – ensuring that all reported problems are responded to or responsibility handed to the relevant organization.



Operations Centre Project



- Since there is no existing global production grid, it is not well understood what is necessary in a Grid Operations Centre.
- This project is to provide input to defining the scope and responsibilities of a full GOC system for LCG
 - This will be done by using existing tools to build and deploy a basic monitoring and operations infrastructure in order to gain experience and to learn what might eventually be needed.



Proposal



- RAL have agreed to take the lead role in this project
- IN2P3 have expressed interest in collaborating
- INFN monitoring tools



Goals



- Build a grid infrastructure monitoring system that can be used from July in LCG-1.
 - Based on existing tools, integrated through web servers
- Build a prototype Grid Operations Centre (GOC) for LCG-1.
 - Timescale: end 2003.
 - Analyze and document the existing tool functionalities and experience gained during initial testing and operation in LCG-1.
- Produce a strategic development plan to define a grid operations centre for LCG in 2004-2005.
 - It is expected that towards the end of 2004 the basic grid middleware will be based on OGSA and thus the monitoring tools can be expected to be re-developed. The present project should provide the experience needed to be able to define the future operations model for LCG in late 2005 and later.



Deliverables

- Initial description and definition of a Grid Operations Centre
 - for LCG in 2003-2005 to be agreed by the (May?) 2003 GDB.
- A staged implementation plan
 - that includes a specification of the necessary resources.
- Implement an initial prototype GOC for July 2003
 - Basically a monitoring system and basic operations support
- Implement a second prototype GOC for November 2003.
 - The scope and functionality of these will be defined in the implementation plan above, but will be based on existing tools and implementations and the November prototype should be deployed in at least 2 cooperating instances.
- In early 2004 an updated GOC definition and implementation plan
 - based on the experience gained during testing and operations in 2003.
- Definition of the proposed operations model for LCG.



Resources



- RAL:
 - Trevor Daniels – project leader (0.x FTE)
 - 1 FTE technical (being hired)
- IN2P3 Lyon:
 - Rolf Rumler (0.5???)
- (other LCG sites?)
- INFN
 - Monitoring tools
- Indian (BARC) group
 - 2-3 sw engineers, monitoring tools and trouble ticket system
- Collaborators (expressed interest):
 - DataTAG, iVDGL (Rob Gardner), MonaLisa (Iosef Legrand)
 - Potentially: Teragrid
- Other resources:
 - GGF: production grids research area, user services (trouble ticket systems)



Available Tools



- DataTAG/WorldGrid: Nagios based
- EDG: MapCentre; WP7: Network monitoring
- iVDGL: Ganglia based
- GridPP tools
- US-CMS: MonaLisa (ideas for autonomic response)
- SLAC etc: Network monitoring