Grid Operations Centre
Progress to Aug 03

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GDB

2 Sept 2003

GOC Group

- The June GDB agreed that a task force should be created to define the requirements and agree on a prototype for a Grid Operations Service

- The members of this GOC Steering Group are
  - Trevor Daniels (RAL) RAL, Convenor
  - Markus Shultz (CERN) CERN
  - John Gordon (RAL) RAL
  - Rolf Rumler (IN2P3) IN2P3
  - Cristina Vistoli (INFN) INFN
  - Claude Wang Taipei (observer)
  - Eric Yen Taipei
  - Ian Fisk FNAL, US-CMS
  - Bruce Gibbard BNL, US-Atlas

GOC Group

The views of the group have been sought on several topics:

- Revised proposal for GOC
  - resulted in submission to July GDB
- Prototype website
  - general layout
  - restrictions on certain pages
  - monitoring pages
- Approaches to monitoring SLAs
  - possible tests for CE and RB services
- Security proposals
  - as presented to Sept GDB

GOC Phase 1
Jul 03 – Oct 03

1. Set up initial monitoring centre by end-Jul 03 using monitoring tools available for immediate deployment	Done
2. Develop Grid operations security policy in consultation with security officers	In progress
3. Define the service level parameters which must be published and monitored for each of the critical grid services	Started
4. Develop draft reporting formats and establish a monitoring regime for determining and presenting service level information	About to start
5. Evaluate and select tools which will be deployed in Phase 2	Not yet begun

GOC Website

http://www.grid-support.ac.uk/GOC/

Main Areas:

GOC Overview	Phase 1 complete
Participating Institutions	Up to date
LCG Home	Complete (link)
Contact us	Phase 1 complete
Service Level Parameters	Marker
Change Notification	Marker
Configuration	Awaiting details
Monitoring	Phase 1 complete
Security	In progress
News	Marker
Meetings	Marker
Links	Partly done

Monitoring

This page brings together the several LCG monitoring tools which are readily available, together with a touch-sensitive map which links to pertinent information about each LCG site, including a link to each site's published status.

The currently running and displaying monitors are:

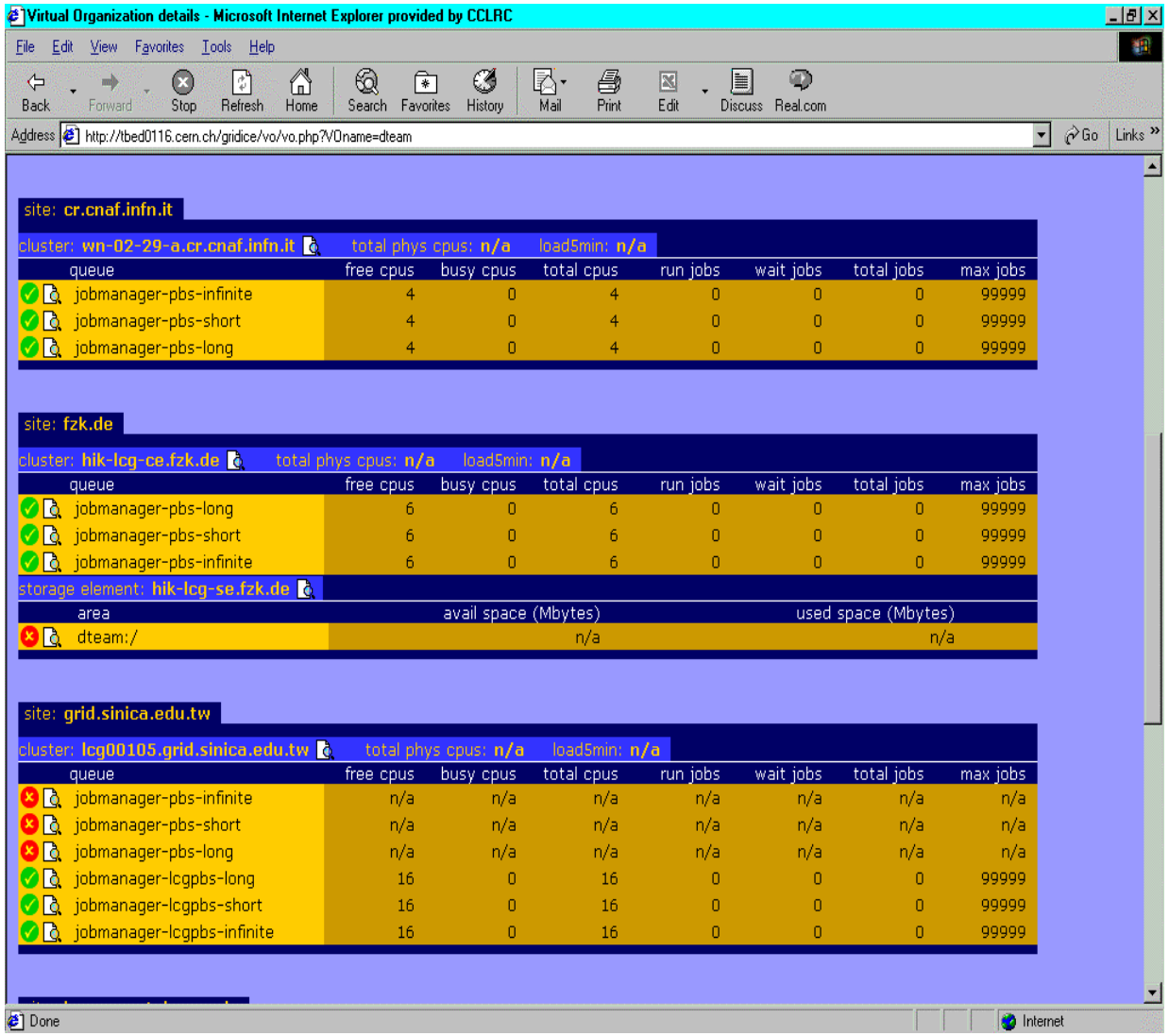
- GridICE monitoring of LCG-1 (at CERN)
- GridICE monitoring of LCG-0 (at CNAF)
- MapCenter monitoring of LCG-1 (at RAL)
- LCG-1 overall rollout status page (at CERN)
- LCG-1 status measured with GridPP (at RAL)

➢ Each of these provides multiple views of status information

GridICE VO view

Partial view of DTEAM VO showing infn, fzk and sinica

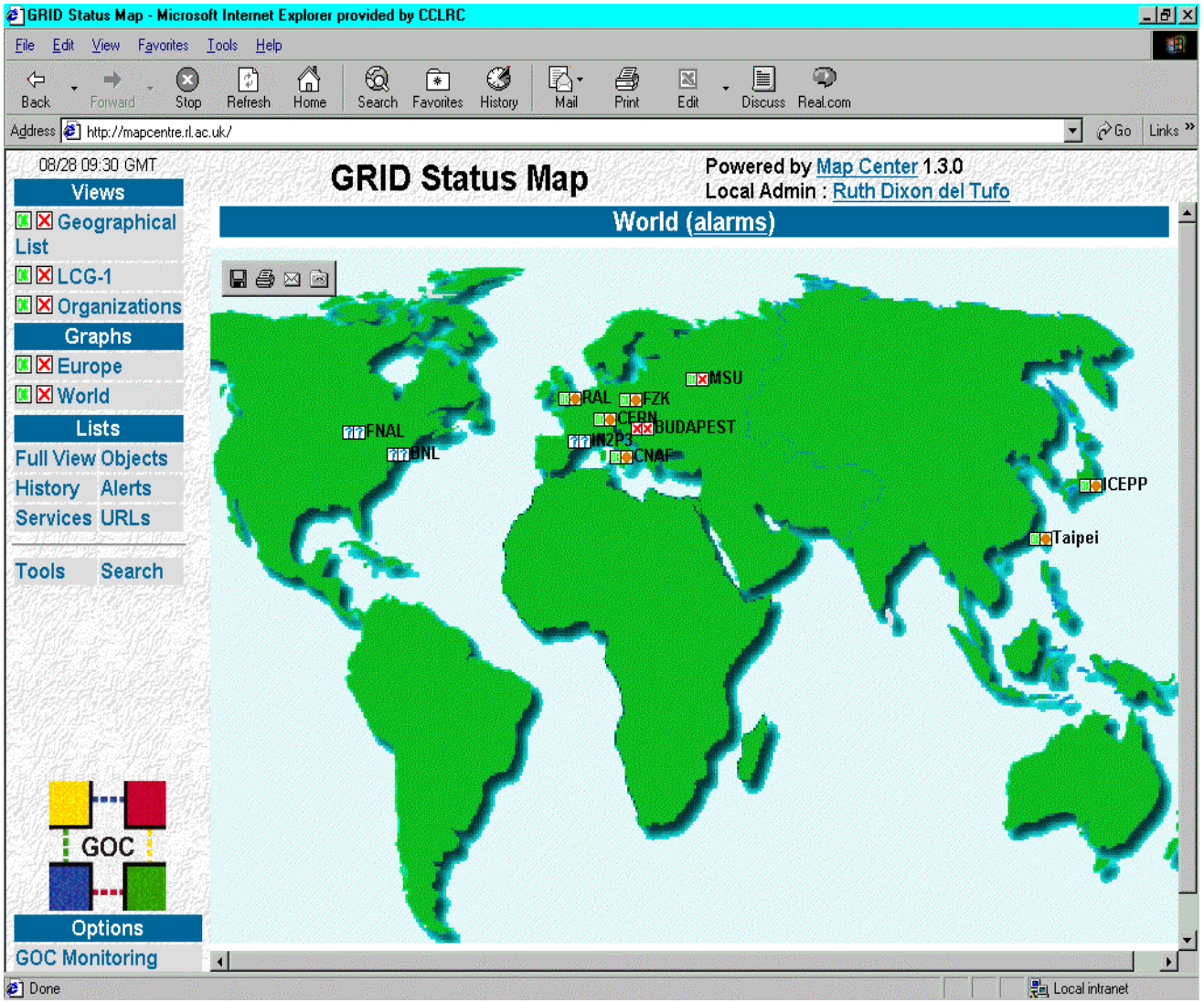
Shows info on cpu loading, jobs, and storage by cluster



MapCenter

Performs low-level tests and aggregates these up through several levels to country, showing best and worst status at each level.

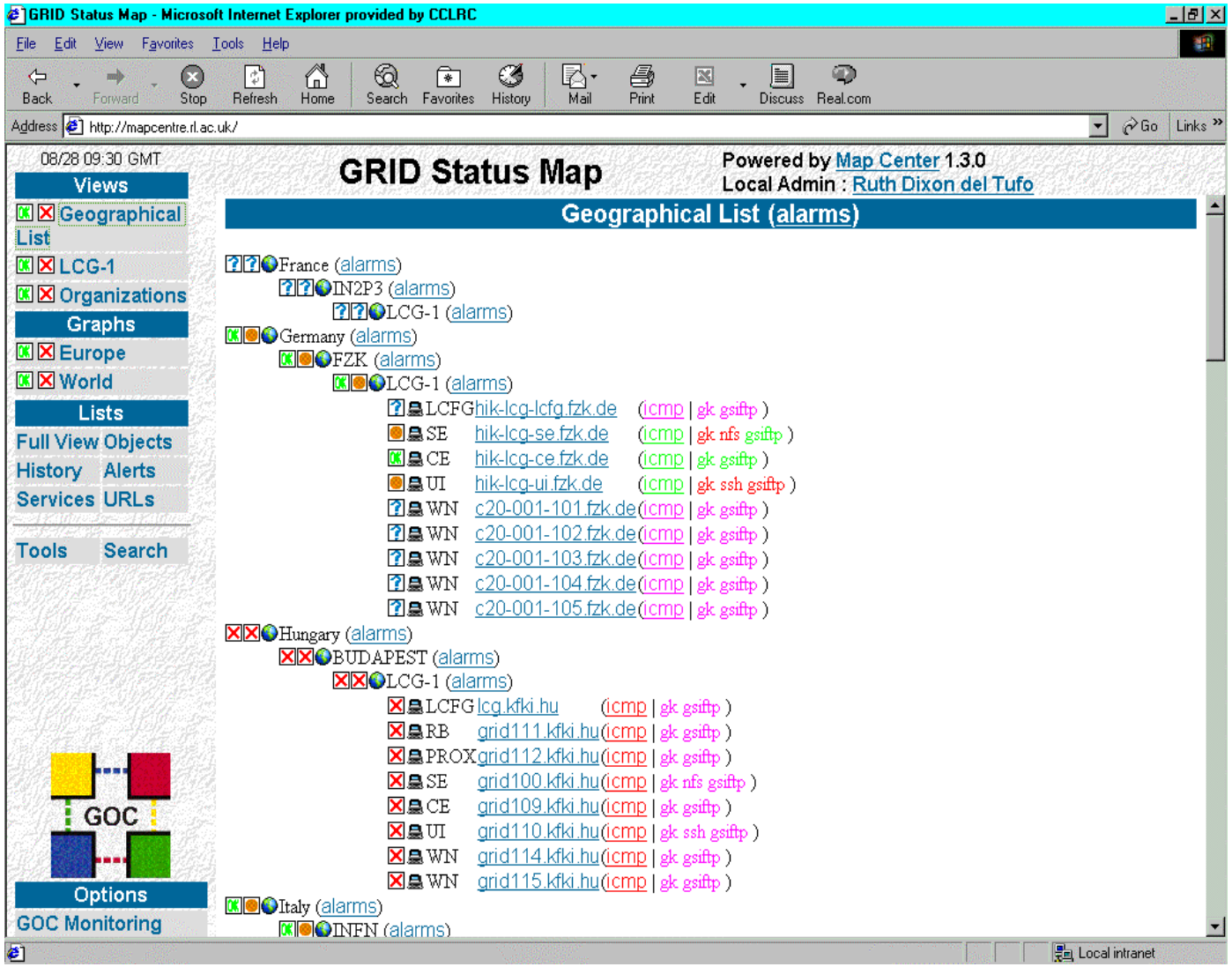
This is the top level world view showing individual sites.



MapCenter

Part of the MapCenter full list view showing aggregation up to country.

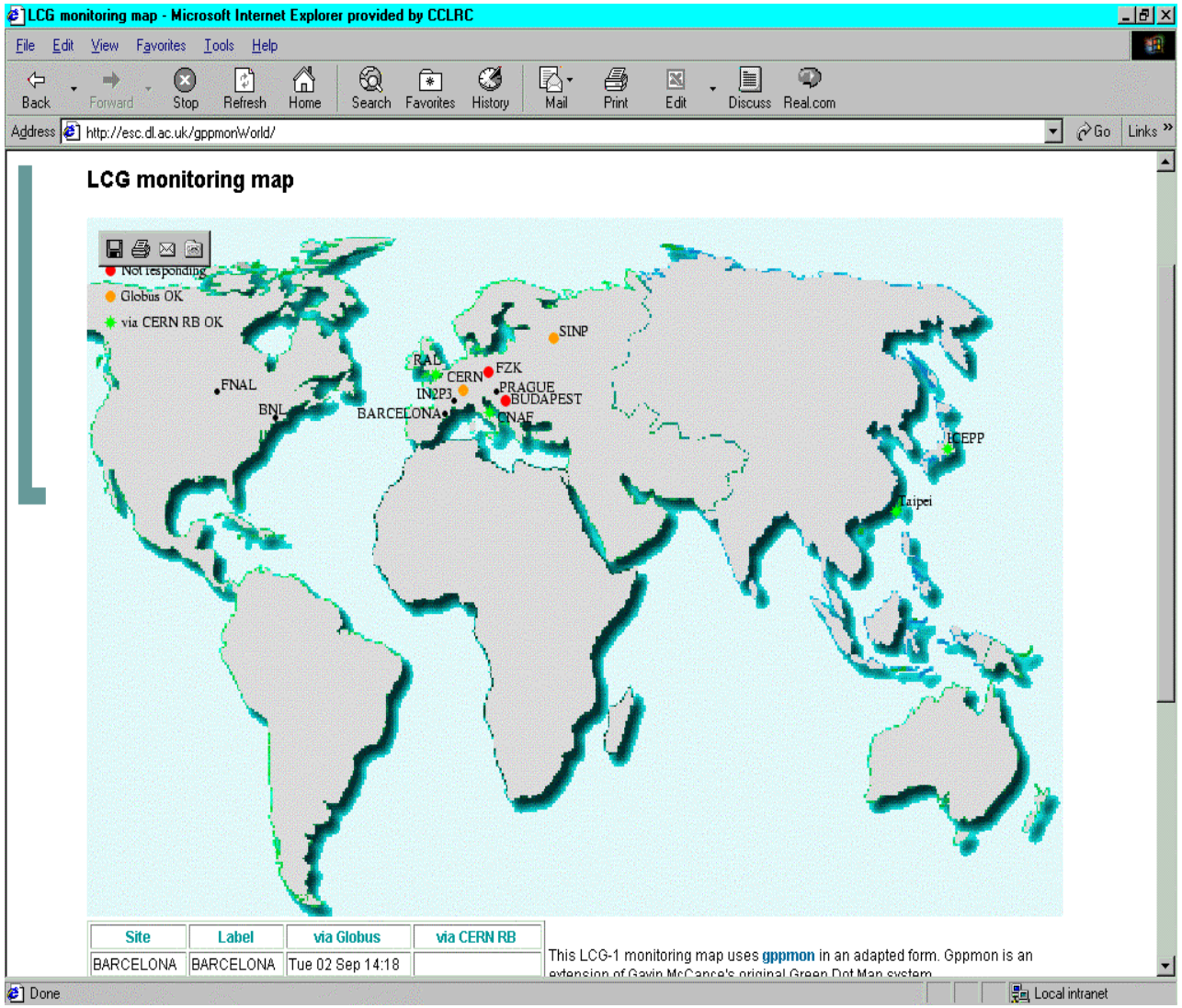
Tests include icmp, gk, gsiftp, nfs, ssh



GridPP Monitor

Submits job via globus-job-run and via CERN RB, displays coloured dot to indicate recent results on map and also in list form.

Gives user-level view of status



Monitoring Issues

1. Monitors must be able to rely on published information about the configuration (services in production) at a site. Static lists are too difficult to maintain. At present the information being published is incomplete, so this is being gleaned from a variety of sources.
2. All the monitors present views which are potentially useful for operational monitoring. They are complementary and it is expected that all will have a place in the GOC. Not all are immediately suited to the end-user, so some monitors may be hidden from the general user.
3. It is not yet clear which monitor, if any, will be most suited to monitoring compliance with SLAs. One which can provide historical information of Availability, Reliability and Performance for each Service type will be required.

Security Policy

- Security and Availability Policy drafted late August
- Discussed with Security Group on 28 Aug 03
- Revised and extended draft prepared and circulated to Security Group for comment 2 Sep 03
- Final draft presented to GDB at this meeting
- Further discussion under that agenda item

Approach to Service SLAs

- Formal Contract with GOC? – No, because
  - GOC is not (likely to be) a legal body
  - GOC will not (be likely to) have any formal powers over Service Providers
  - GOC will not (be likely to) pay for any Services
  - So difficult for GOC to enforce a traditional SLA
- Instead, prefer a virtual contract between Service Provider and the LCG Grid Community
  - Any Centre wishing to provide a Service must publish its design levels for the specified service level parameters of that Service
  - GOC will then monitor the actual levels achieved and publish them so they may be compared with the design levels
  - Service Providers (Centres) will then compete on quality or possibly quality/cost, either to attract work or enhance reputation

Form of SLA

- One for each instance of a LCG Service
- Published on the GOC website in standard format exactly as provided by the Service Administrator
- Format yet to be developed and agreed, but likely to contain as a minimum
  - Identification of Service (type, release, etc)
  - Statement on compliance with Security and Availability Policy (standard wording)
  - Limitations on use (if any)
  - Designed Availability
  - Designed Reliability
  - Designed Performance (Service-specific; to be defined for each type of Service)

Next steps

- Continue to develop GOC website and extend configuration of monitors as rollout continues
- Work with Security Group on Policy, Procedures, Codes of Conduct and Guides
- Incorporate drafts of these in GOC website as they become available for community comment
- Devise precise form of SLAs and develop GOC website to publish them
- Define service level parameters for Compute Element, Resource Broker, Job Submission and Information Services
- Develop monitoring regime to measure service level parameters for CE, RB, JSS and IS