



*EGEE Greek 3<sup>rd</sup> parties kick-off, May 27-28<sup>th</sup>, 2004*

Enabling Grids for  
E-science in Europe

# SA1 Technical Discussion

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# Objectives of this session

- Elaborate on technical topics addressed under SA1
- Reach common understanding
- Answer questions

# Outline

- M/W certification and release preparation
- M/W deployment
- User and operational support
- Other services

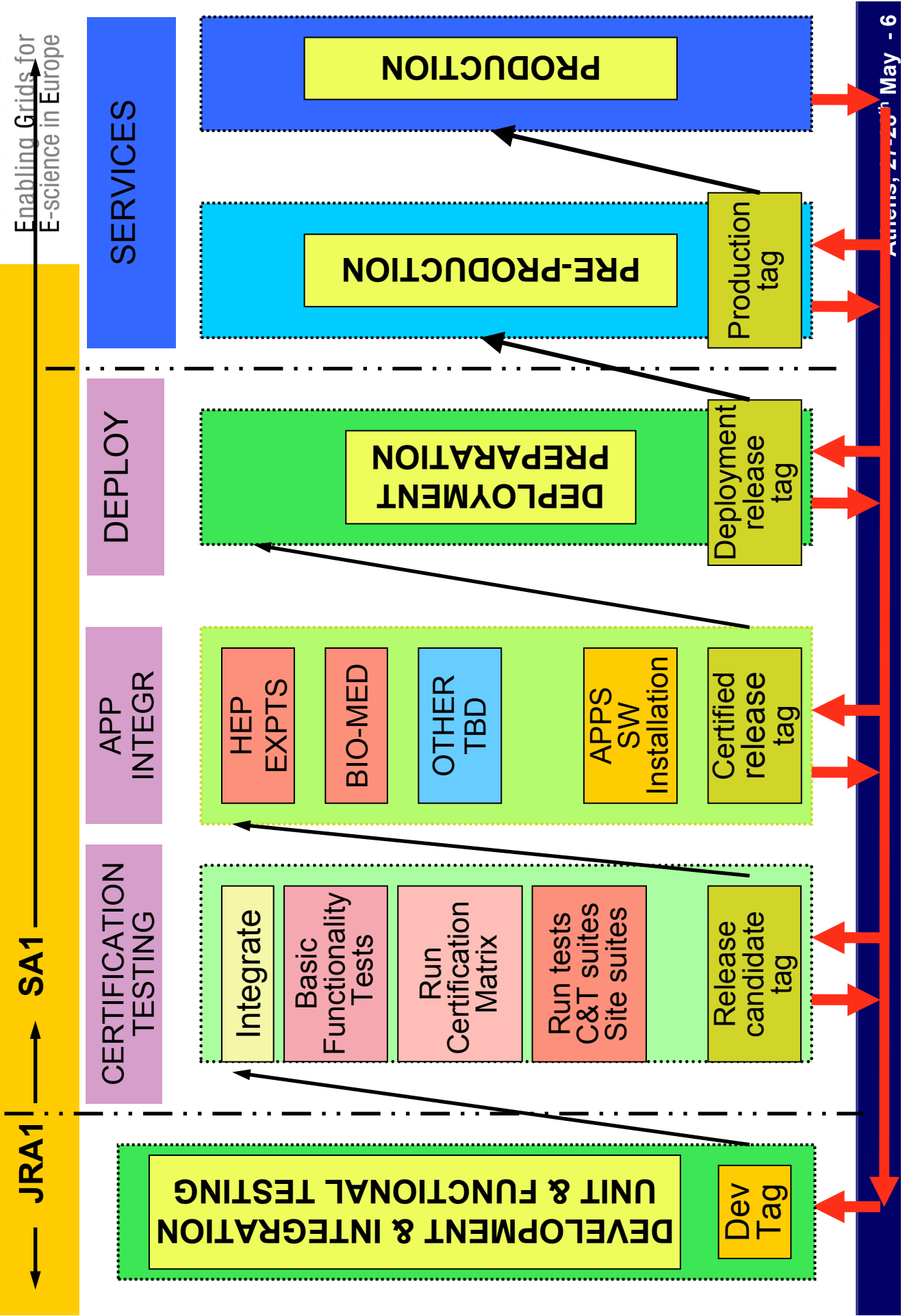
## Certification and release preparation

- JRA1 delivers m/w
- ROC performs acceptance testing (certification)
  - Certification testbed needed
- Participate in development of testing suites
- Porting to other platforms if necessary (unlikely)
- Customization of m/w to the local configuration
- Establishing installation guidelines and procedures
  - Installation testbed needed

# Deployment and upgrades

- New release (or upgrade) deployed on production RCs
- Site certification
- SLA establishment with RC
- Deployment of core GRID services

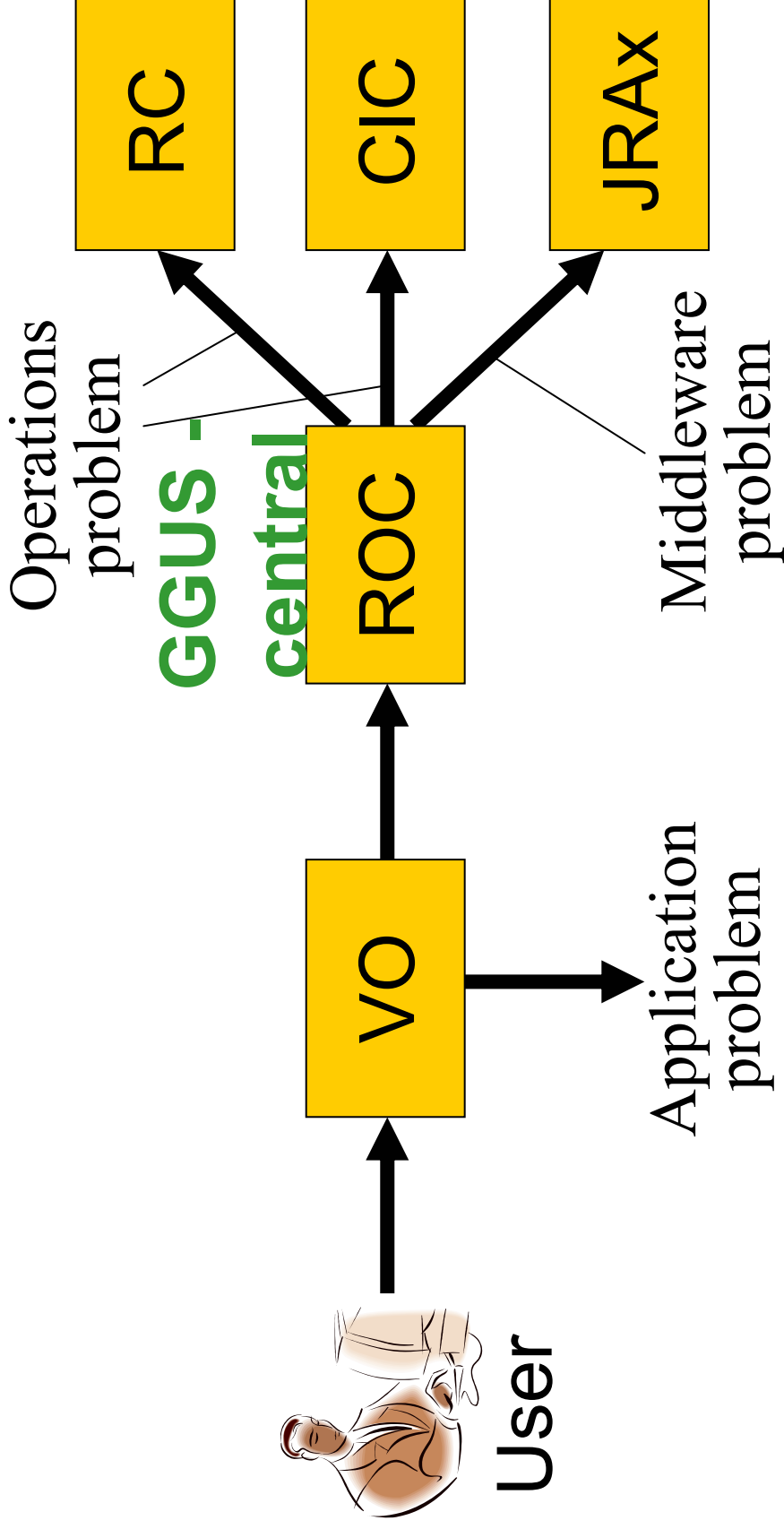
# Release cycle



# Operations and support

- Operational and user support
- Problem diagnosis
- Problem referral to CICs/JRA1
- Problem solutions
- Automated procedures for daily checks + failure notification
- Problem tracking system for support
- Participate in developing and running coherent Trouble Ticket (TT) and database infrastructure
- Coordinate a potential Knowledge Base
- Monitoring service (utilisation, SLAs, accounting etc): local and centralised (incl. database)

# Current user support workflow: current FZK model





# Monitoring: EGEE stage 1

- RAL runs monitoring
- All ROCs added to database through their ROC i.e ROC takes responsibility for adding and checking information / data consistency in the database
- Each ROC will monitor its sites and regional services through the GOC monitoring at RAL
- Timescale ~ 3-6 Months

## Monitoring: EGEE stage 2

- Distribution of GOC s/w to allow ROCs to run their own monitoring i.e they run the monitoring tools themselves!
- Centralised Database based at RAL but ROCs configure their monitoring from the centralised database
- Further monitoring development required before completion of this stage (in the UK)
- Timescale ~ 6 – 12 Months

## Monitoring: EGEE stage 3

- Distribute database amongst the ROCs
  - A large distributed database instead of a single database
- Monitor core services too
- Timescale ~12 Months and beyond

# Example: RAL site contacts

- List of people to notify when there are problems
- Currently part of GOC; should be part of Support and linked to portal



## Contacts:

| Name           | Description            | Email address  | Tel                | Hours                     |   |
|----------------|------------------------|--|--------------------|---------------------------|---|
| Trevor Daniels | Deployment Team Member | <a href="mailto:t.daniels@rl.ac.uk">t.daniels@rl.ac.uk</a>   | +44 (0)1235 778093 | 0800 - 1700<br>(Mon-Wed)  | <a href="#">Edit</a> <a href="#">Delete</a> |
| Dave Kant      | Deployment Team Member | <a href="mailto:d.kant@rl.ac.uk">d.kant@rl.ac.uk</a>         | +44 (0)1235 778178 | 0900 - 18.00<br>(Mon-Fri) | <a href="#">Edit</a> <a href="#">Delete</a> |
| Martin Bly     | Deployment Team Member | <a href="mailto:m.j.bly@rl.ac.uk">m.j.bly@rl.ac.uk</a>       | +44 (0)1235 446981 |                           | <a href="#">Edit</a> <a href="#">Delete</a> |
| Steve Traylen  | Deployment Team Member | <a href="mailto:s.traylen@rl.ac.uk">s.traylen@rl.ac.uk</a>   | +44 (0)1235 446777 |                           | <a href="#">Edit</a> <a href="#">Delete</a> |
| Andrew Sansum  | Deployment Team Member | <a href="mailto:r.a.sansum@rl.ac.uk">r.a.sansum@rl.ac.uk</a> | +44 (0)1235 445863 |                           | <a href="#">Edit</a> <a href="#">Delete</a> |
| John Gordon    | Deployment Team Member | <a href="mailto:j.c.gordon@rl.ac.uk">j.c.gordon@rl.ac.uk</a> | +44 (0)1235 446574 |                           | <a href="#">Edit</a> <a href="#">Delete</a> |
| Alistair Mills | -                      | <a href="mailto:a.b.mills@rl.ac.uk">a.b.mills@rl.ac.uk</a>   | +44 (0)1235 446084 |                           | <a href="#">Edit</a> <a href="#">Delete</a> |
| Matt Thorpe    | GOC DB Web Admin       | <a href="mailto:m.s.thorpe@rl.ac.uk">m.s.thorpe@rl.ac.uk</a> | +44 (0)1235 778178 | 0830 - 1700<br>(Mon-Fri)  | <a href="#">Edit</a> <a href="#">Delete</a> |

[\[Click to add a new contact\]](#)

# Example: RAL site node info



## Nodes:

| Type | Hostname  | IP Address      | Group   |
|------|-----------|-----------------|---|
| LCFG | lcfg      | 130.246.183.111 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| MDS  | lcgcs01   | 130.246.183.187 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| RB   | lcgrb01   | 130.246.183.184 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| CE   | lcgce01   | 130.246.183.182 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| SE   | lcgse01   | 130.246.183.181 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| UI   | lcgui01   | 130.246.183.183 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| BDII | lcgbdii   | 130.246.183.185 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| PROX | lcgrbp01  | 130.246.183.186 | LCG-1 <a href="#">Edit</a> <a href="#">Delete</a> |
| RB   | lcgrb02   | 130.246.183.189 | LCG-2 <a href="#">Edit</a> <a href="#">Delete</a> |
| CE   | lcgce02   | 130.246.183.188 | LCG-2 <a href="#">Edit</a> <a href="#">Delete</a> |
| BDII | lcgbdii02 | 130.246.183.191 | LCG-2 <a href="#">Edit</a> <a href="#">Delete</a> |
| UI   | lcgui02   | 130.246.183.194 | LCG-2 <a href="#">Edit</a> <a href="#">Delete</a> |
| UI   | gppui04   | 130.246.183.172 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |
| CE   | gppce05   | 130.246.187.142 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |
| RB   | gppse05   | 130.246.187.140 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |
| RLS  | gpprls05  | 130.246.187.153 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |
| MON  | gpprg05   | 130.246.187.151 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |
| NM   | gppnm06   | 130.246.187.145 | EDG <a href="#">Edit</a> <a href="#">Delete</a>   |

[\[Click to add a new node\]](#)

http://grid-ice.esc.rl.ac.uk/gridice



GridICE is monitoring



the eyes of the Grid



GridICE is a product of

Site view VO view Geo view Grid view Help about

Select Site  and/or Role  Show

| Site               | Slot#       | SlotFree    | Computing Resources |            |           | Storage Resources |            |         |               |                |   |
|--------------------|-------------|-------------|---------------------|------------|-----------|-------------------|------------|---------|---------------|----------------|---|
|                    |             |             | SlotLoad            | RunJob     | WaitJob   | Power             | CPU#       | CPULoad | Available     | Total          | % |
| cern.ch            | 408         | 180         |                     | 0          | 0         | -                 | -          | -       | 67.5 Gb       | 69.1 Gb        |   |
| cnaf.infn.it       | -           | -           | -                   | -          | -         | -                 | -          | -       | -             | -              | - |
| cr.cnaf.infn.it    | 2154        | 1086        |                     | 253        | 0         | 762647            | 387        |         | 868.0 Gb      | 999.7 Gb       |   |
| fnal.gov           | 12          | 12          |                     | 0          | 0         | -                 | -          | -       | -             | -              | - |
| fzk.de             | -           | -           | -                   | -          | -         | -                 | -          | -       | -             | -              | - |
| gridka.de          | -           | -           | -                   | -          | -         | -                 | -          | -       | -             | -              | - |
| gridpp.rl.ac.uk    | 438         | 273         |                     | 55         | 0         | -                 | -          | -       | 59.8 Gb       | 69.0 Gb        |   |
| grid.sinica.edu.tw | 294         | 294         |                     | 0          | 0         | -                 | -          | -       | -             | -              | - |
| hep.ph.ic.ac.uk    | 126         | 126         |                     | 0          | 0         | -                 | -          | -       | 9.2 Gb        | 16.8 Gb        |   |
| ifae.es            | 480         | 480         |                     | 0          | 0         | 433978            | 160        |         | 5.6 Tb        | 22.4 Tb        |   |
| nikhef.nl          | 500         | 230         |                     | 137        | 13        | -                 | -          | -       | 1.4 Tb        | 1.7 Tb         |   |
| triumf.ca          | 4490        | 30          |                     | 0          | 0         | -                 | -          | -       | 729.1 Gb      | 731.1 Gb       |   |
| <b>TOTAL</b>       | <b>8902</b> | <b>2711</b> |                     | <b>445</b> | <b>13</b> | <b>1196625</b>    | <b>547</b> |         | <b>8.6 Tb</b> | <b>25.9 Tb</b> |   |



Select  and/or Role   Full View

| gridpp.rl.ac.uk         |        | UpTime: 1-2:11  |           | Reg.OpenFiles.: 3141 |      | Socket: TCP(29) UDP(17) |      | FS  | NA   | PA  | Full  |
|-------------------------|--------|-----------------|-----------|----------------------|------|-------------------------|------|-----|------|-----|-------|
| Process Name            | Status | Inst#           | Instances | Last                 | CPU  | Memory                  | Time |     |      |     |       |
|                         |        |                 | First     |                      | 1Max | 1Max                    | 1Max | All | 1Max | All | All   |
| condorg-scheduler       | S      | 1               | 1-3:15    | 1-3:15               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| condor-master           | S      | 1               | 1-3:15    | 1-3:15               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| fmon-agent              | S      | 1               | 1-3:16    | 1-3:16               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| ftp-server              | S      | 1               | 1-2:16    | 1-2:16               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| job-controller          | S      | 1               | 1-3:15    | 1-3:15               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:2 |
| local-logger            | S      | 1               | 1-2:1     | 1-2:1                | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| local-logger-interlog   | S      | 6               | 1-4:1     | 0-3:11               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:3 |
| logging-and-bookkeeping | S      | 11              | 1-2:55    | 0-0:7                | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| log-monitor             | S      | 1               | 1-3:11    | 1-3:11               | 0    | 0                       | 1    | 1   | 1    | 1   | 0-0:2 |
| network-server          | S      | 21              | 1-3:13    | 1-3:13               | 0    | 0                       | 1    | 1   | 1    | 1   | 0-0:4 |
| proxy-renewal           | S      | 4               | 1-3:16    | 1-3:14               | 0    | 0                       | 0    | 0   | 0    | 0   | 0-0:0 |
| workload-manager        | S      | 4               | 1-3:16    | 1-3:16               | 0    | 0                       | 1    | 1   | 1    | 1   | 0-0:4 |
| broker                  |        |                 |           |                      |      |                         |      |     |      |     |       |
| lgce02.gridpp.rl.ac.uk  |        | UpTime: 7-22:3  |           | Reg.OpenFiles.: 2822 |      | Socket: TCP(38) UDP(18) |      | FS  | NA   | PA  | Full  |
| lgse01.gridpp.rl.ac.uk  |        | UpTime: 7-22:34 |           | Reg.OpenFiles.: 1287 |      | Socket: TCP(16) UDP(19) |      | FS  | NA   | PA  | Full  |

# Website / Portal

- <http://grid-it.cnaf.infn.it/>
- <http://grid-deployment.web.cern.ch/grid-deployment/cgi-bin/index.cgi?var=lcg1Status>
- <http://goc.grid-support.ac.uk/gridsite/gocmain/>



# Portal example

# Core services

- Initially to be managed by CICs
- But could be simply hosted by ROCs
- Resource Brokers, Information Servers (BDII), Replica Location Services
- We will have to manage them when we start running regional applications

# Security

- Detailed CA presentation by CK