Monitoring Tools and Procedures





T2 Admin Tutorial 2006, CERN

Judit Novak < Judit. Novak@cern.ch >

Piotr Nyczyk Piotr Nyczyk@cern.ch





- monitoring and related tools
 - SFT, gstat, SFT Admin Page, CIC Portal, FCR
- Grid Operator on Duty procedures
 - GOoD (was: COD)
- tools in development
 - SAM, FCR (new version)





Monitoring and related tools





- Sites Functional Tests
- https://lcg-sft.cern.ch:9443/sft/lastreport.cgi
- site (CE) usability from the users point of view
- constant re-certification, spotting and debugging problems
- testing different aspects of CE:
 - job submission, replica management, LCG version, rgma, CA rpms, etc.
- test suite:
 - submission framework + plug-in tests
- VO-specific tests

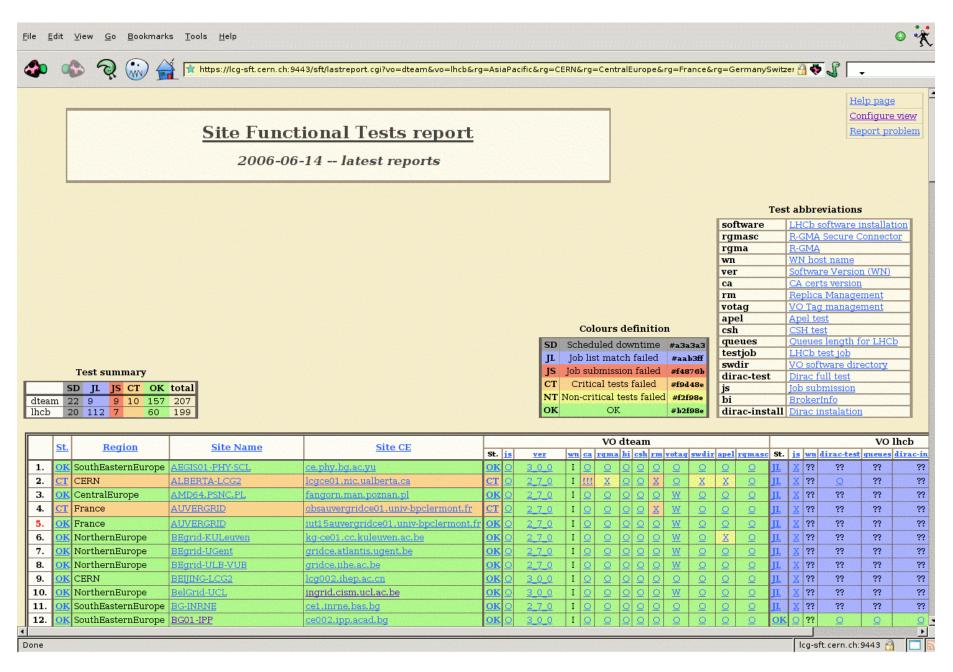




- official SFT submission from CERN
 - submitted for dteam VO
 - in every 3 hours
 - to Certified, Production, and Monitored sites
 - SFT portal refreshed in every 30 mins
- MySQL backend + detailed data in text files
- site details from GOCDB (via RGMA)
- results visible on SFT portal
 - 2 weeks history also shown









SFT Admin Pages (Poznan)

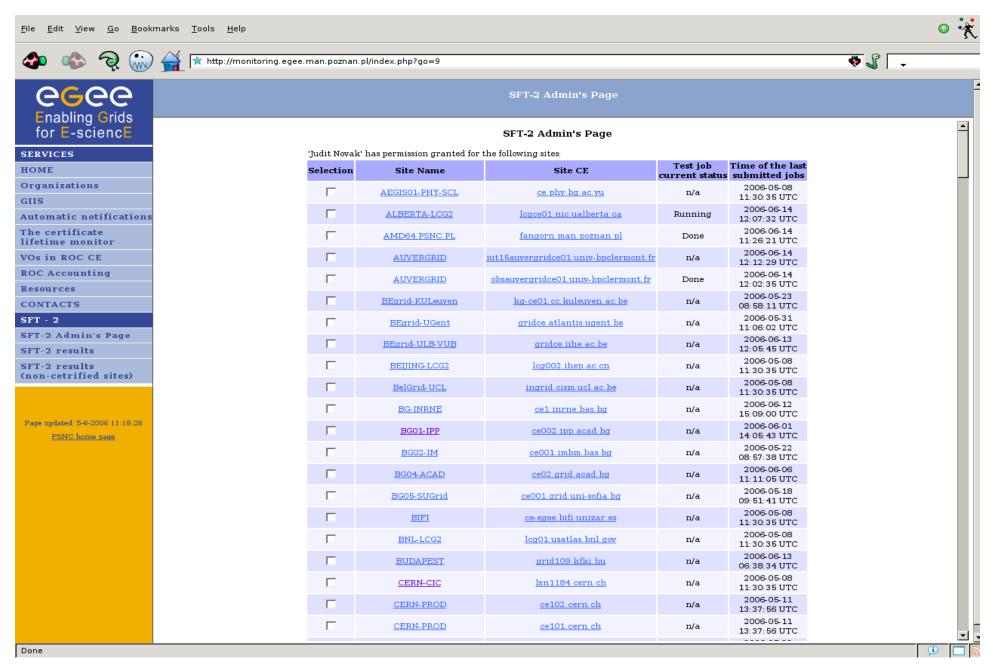


- https://monitoring.egee.man.poznan.pl/admin2
- on-demand SFT submission
- easy to use
- target site selection
- submission possible to non-certified sites
- used by:
 - ROCs: certification of a site
 - ROCs, site admins, GOoDs: speed up debugging



SFT Admin portal





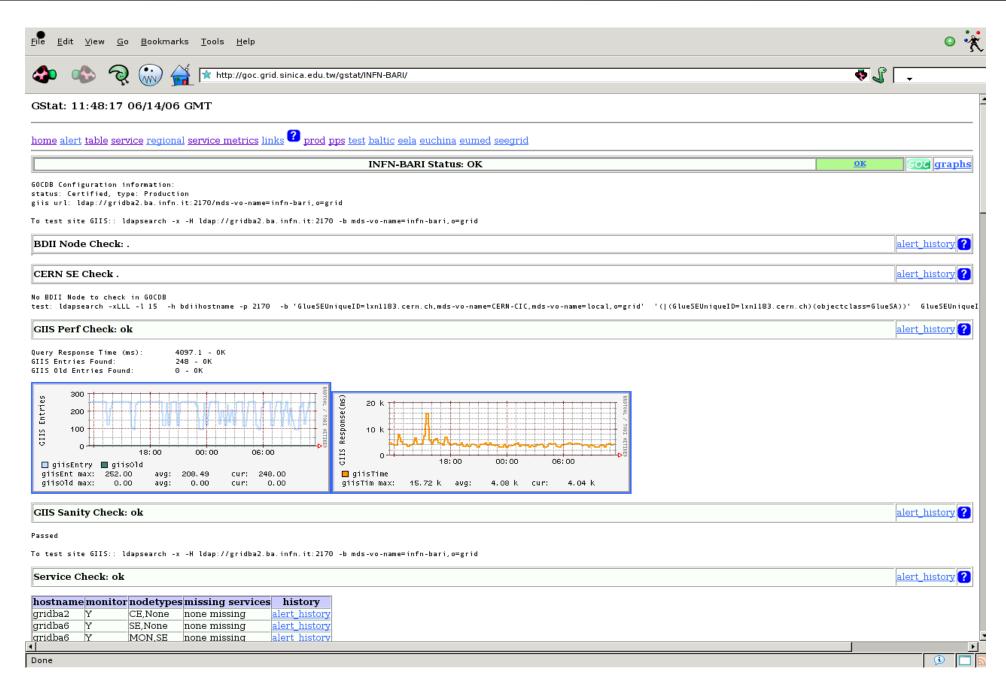




- http://goc.grid.sinica.edu.tw/gstat/
- Information System (BDII) monitoring
- response time, consistency, completeness
- aggregated and detailed views
- plots (history)
 - CPU availability, storage space, running jobs, etc.
- refreshed in every 5 mins (non-intrusive)











- Freedom of Choice for Resources
- https://goc.grid-support.ac.uk/gridsite/bdii/site-apps/FCR-cgi/fcr.cgi
- critical test and resource selection for VOs by manipulating top-level BDII information
- selection on CEs and SEs
- goal is to be able to
 - select which aspects of site functionality are important for the VO
 - blacklist unreliable sites
 - always use stable, "important" sites
 - less reliable sites based on SFT results

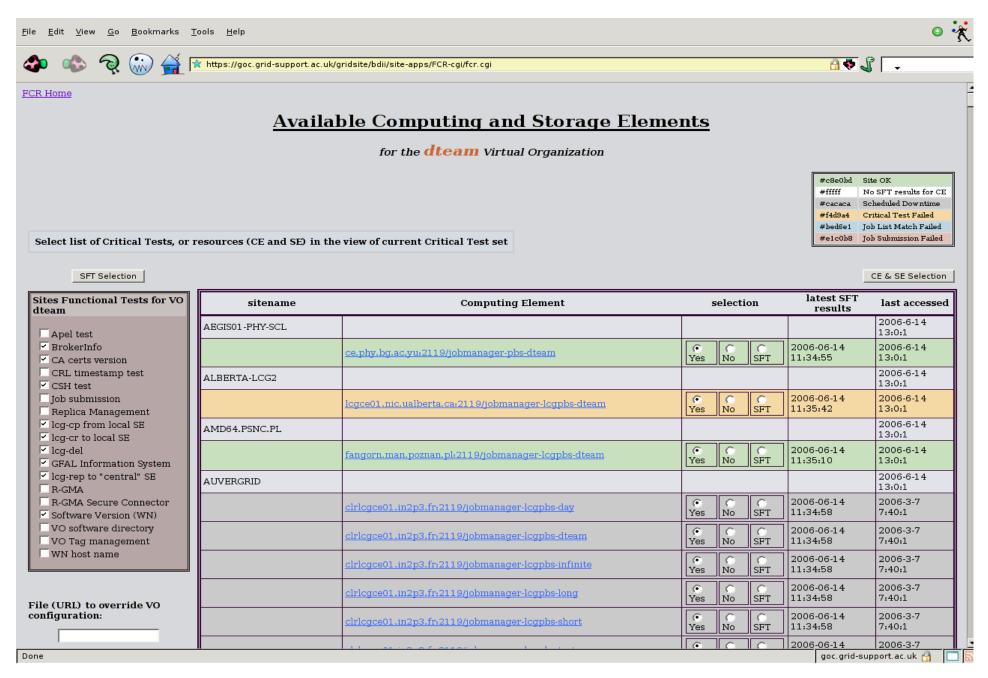




- support for VO-specific test results
- optional usage (BDII configuration parameter)
 - -FCR output: ldif file
- dynamically queries site BDIIs
- information for users only available in raw format
 - new version with user pages







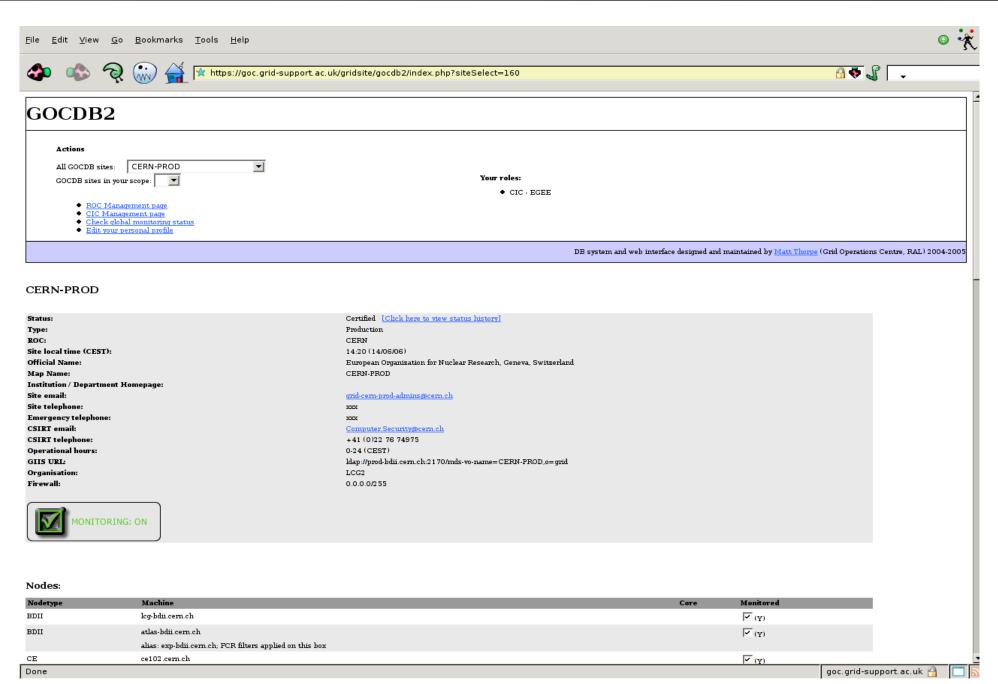




- https://goc.gridsupport.ac.uk/gridsite/gocdb2/index.php
- central database to store static site information
- all LCG/EGEE sites have to register
 - contact, security contact, certification status, site type
- scheduled maintainance
- used by
 - monitoring tools
 - SFT + gstat (via RGMA), SAM (future)
 - script that generates top-level BDII config file
 - operations management tools EGEE/LCG Monitoring Tools, CERN, 16/06/06







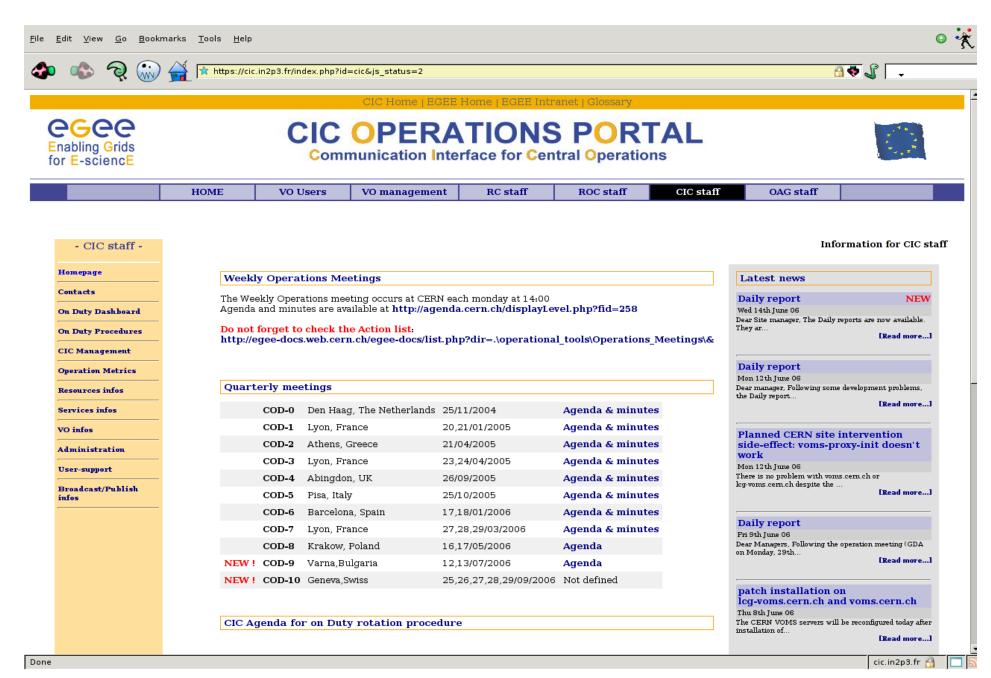




- Communication Interface for Central Operations
- https://cic.in2p3.fr
- all information related to the Grid Operators on Duty (GOoD) activities (documents, shift schedule, etc.) + tools (On Duty Dashboard, EGEE broadcast tool)







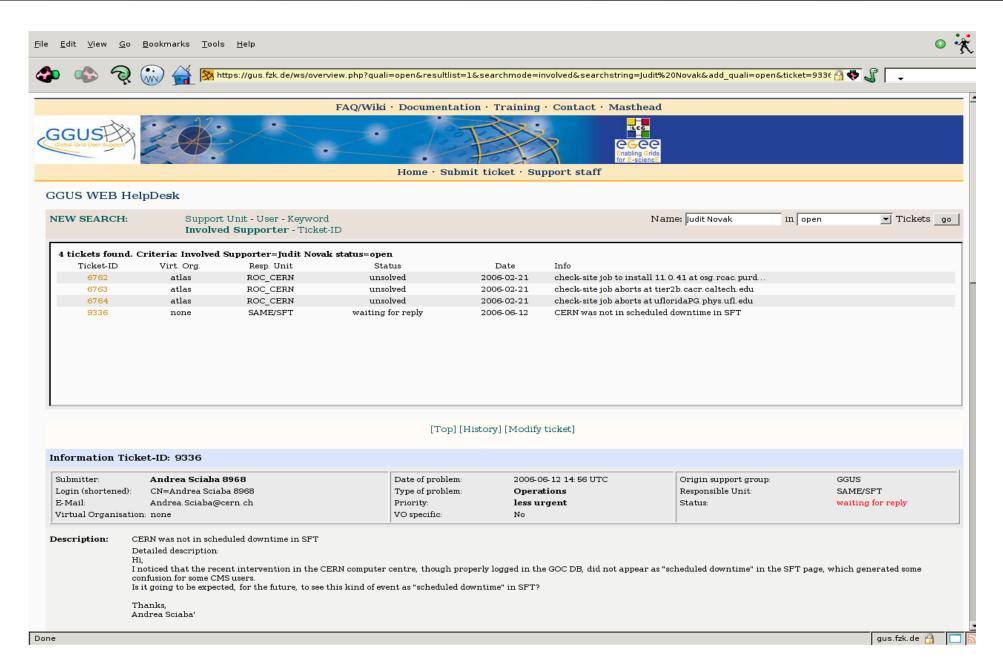




- Global GRID User Support
- http://ggus.org
- ticketing system for the GRID
- based on Remedy
- tickets created by
 - individual users
 - automatically (GOoD Operations)
- provides links to documentation, monitoring infos







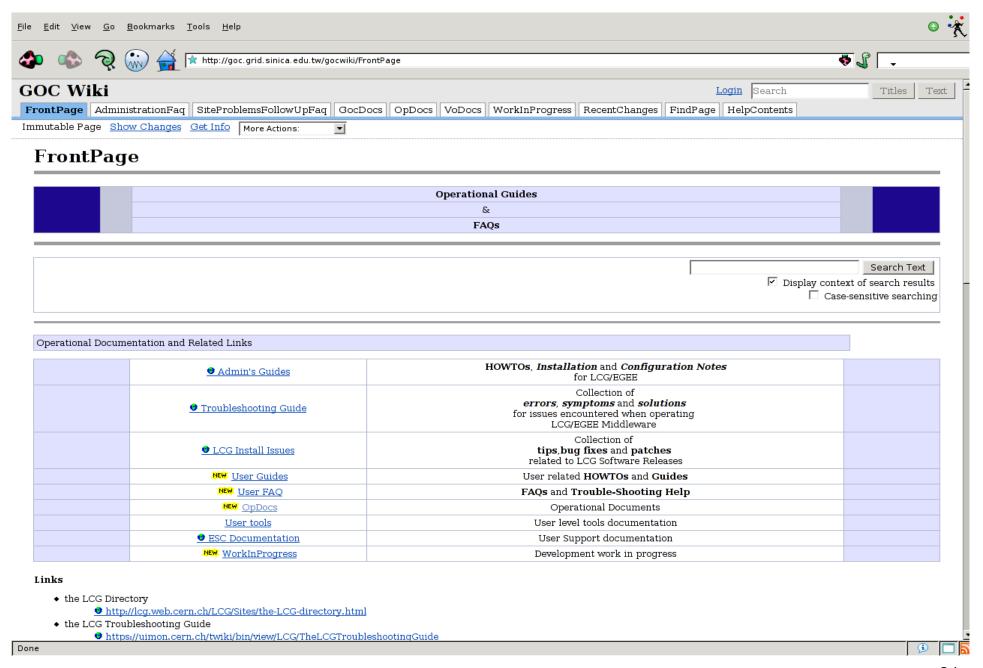




- http://goc.grid.sinica.edu.tw/gocwiki
- collect information related to site management
- contains:
 - Troubleshooting Guide
 - recipes related to error messages
 - Admins FAQ
 - descriptions for procedures (installation, etc.)
 - User Guides
 - LCG version related infos
- the Troubleshooting Guide is particularly useful for errors reported by SFT











Grid Operator on Duty



GOoD operations



- Grid Operator on Duty
- global EGEE/LCG GRID monitoring
- 8 ROCs responsible for the whole GRID operations
 - 1 (2) ROC(s) on a weekly rotation
- WLCG/OSG/EGEE weekly phone conferences



Logical Control Question Control Co



- looking at monitoring tools
 - SFT, gstat, Certificate Monitoring pages
- open tickets using On Duty Dashboard
- escalate expired tickets
- process site responses (update tickets accordingly)
- end of duty: hand-over notes



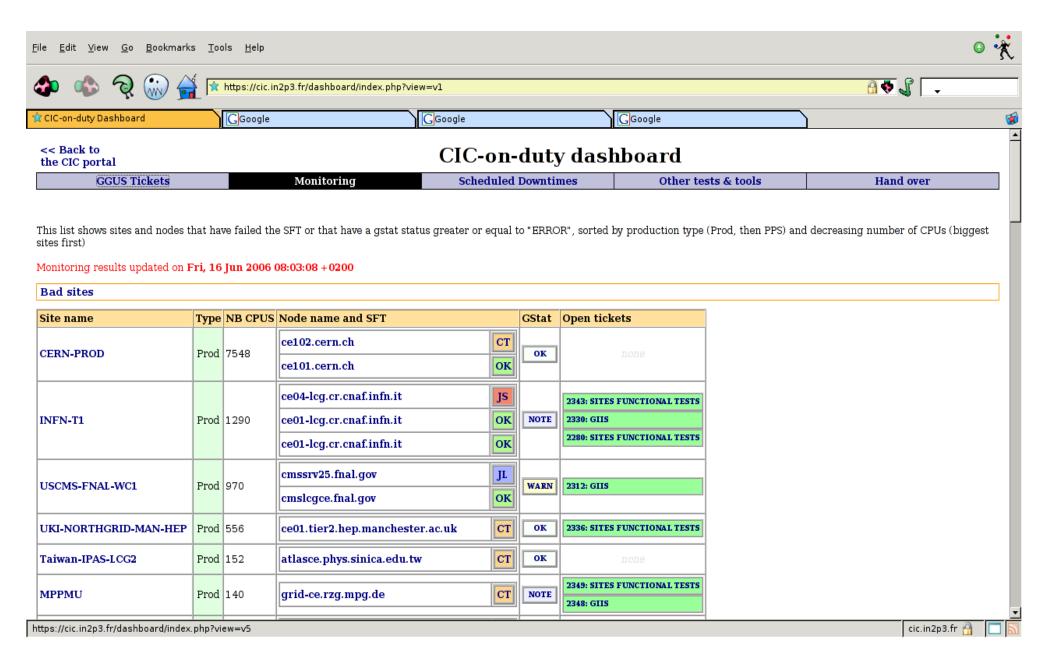
🛂 On Duty Dashboard



- summary of necessary monitoring information + tools for ticket processing
- GOoD ticket linked to corresponding GGUS ticket
- information from GOCDB
- SFT + gstat results
- ticket creation and management tool
- tools for e-mailing concerned sites and ROCs



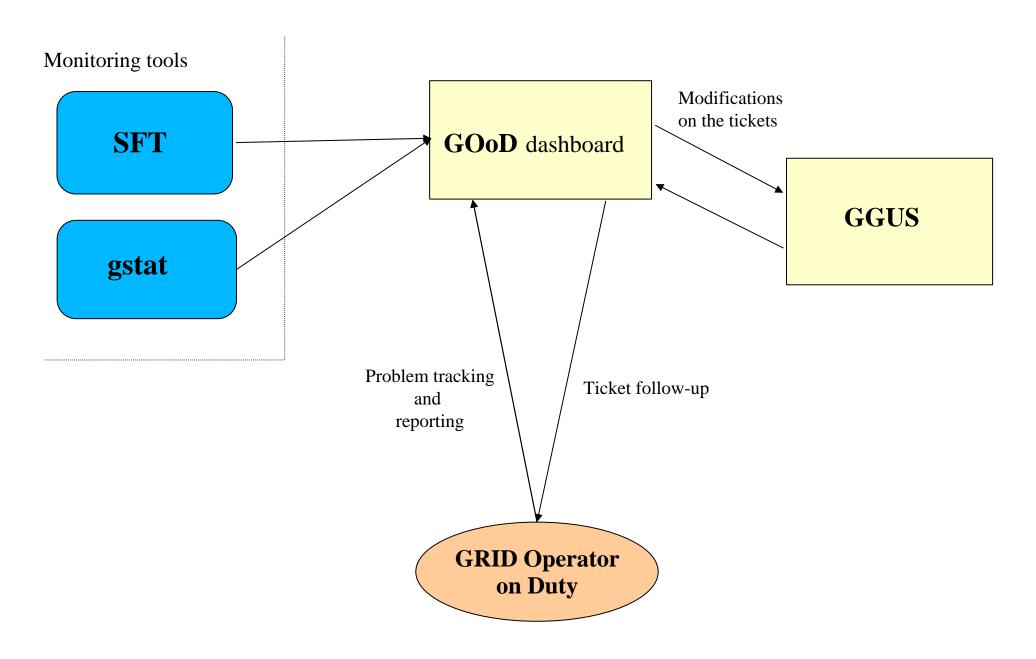






Connection between used tools







Escalation Procedure



- defines the steps to be taken during the lifetime of a ticket
- available on CIC Portal
 - (https://edms.cern.ch/document/701575)
- distinction between sites depending on the amount of resources



- 1.ticket creation
- 2.first mail (to: site + ROC)
- 3.second mail (to: site + ROC)
- 4.suspension from the GRID
- before 4.:
 - a) mail to ROC
 - b) weekly operations meeting call to the site
 - c) mail to OMC for validation



Ecoloria Escalation Procedure -- Quarantine



- site categories
 - -low: CPU <20
 - normal: 20 < CPU < 100</p>
 - high: 100 < CPU</p>
- between 2.-3. and 3.-4.
 - low + normal: 3 days
 - high: 1 days
- before 4.
 - mail to ROC immediately
 - weekly operations meeting ASAP
 - mail to OMC ASAP



Escalation Procedure -- Quarant. 2.

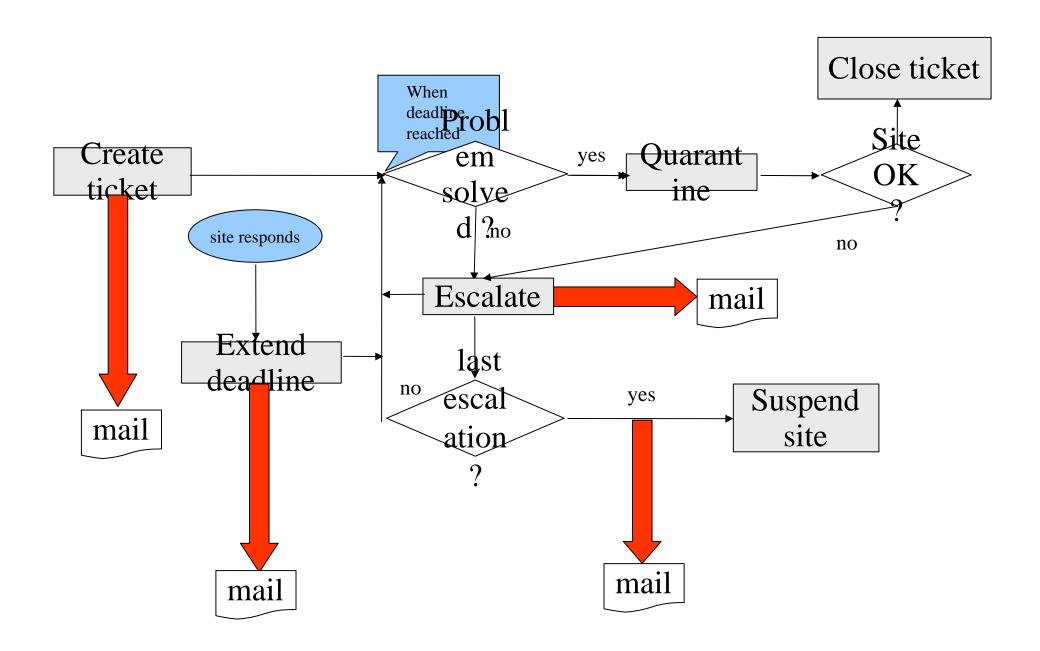


- 3 days quarantine after site is OK before ticket is closed
- site response → deadline can be extended



COD Escalation Procedure









Tools in Development





- Service Availability Monitoring
- https://lcg-sam.cern.ch:8443/sam/sam.cgi
- monitoring framework for GRID services
- "evolution of SFT "
- services involved:
 - CE, SE, BDII, RB, etc.
- development of the framework at CERN
- sensor development distributed
 - CERN, RAL, Sinica
- web services + Oracle DB

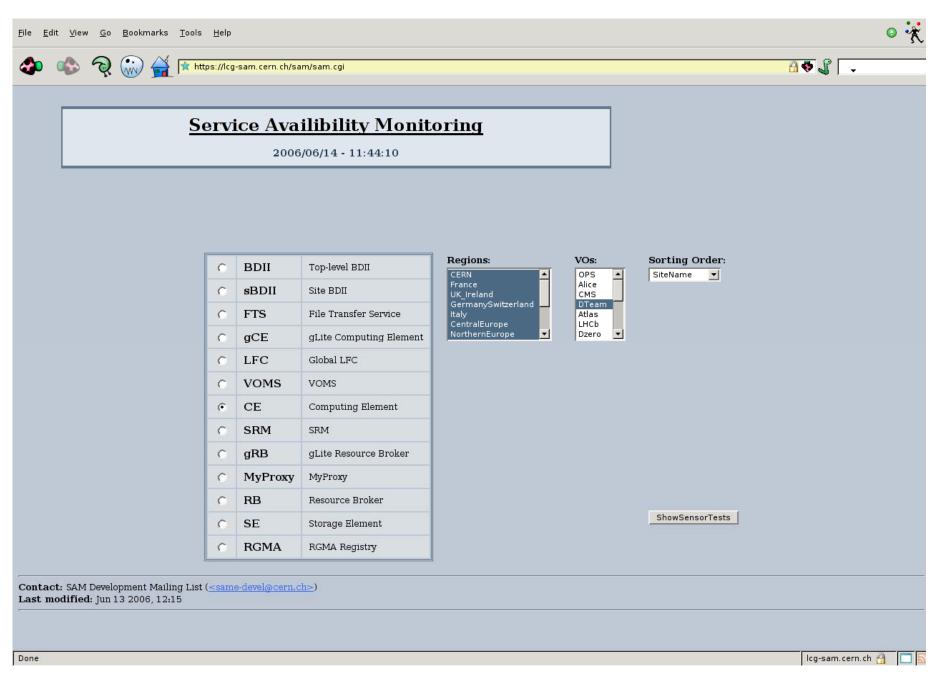




- operations VO: ops
- sensor test submission available for all VOs
- critical test set for VOs (defined using FCR)

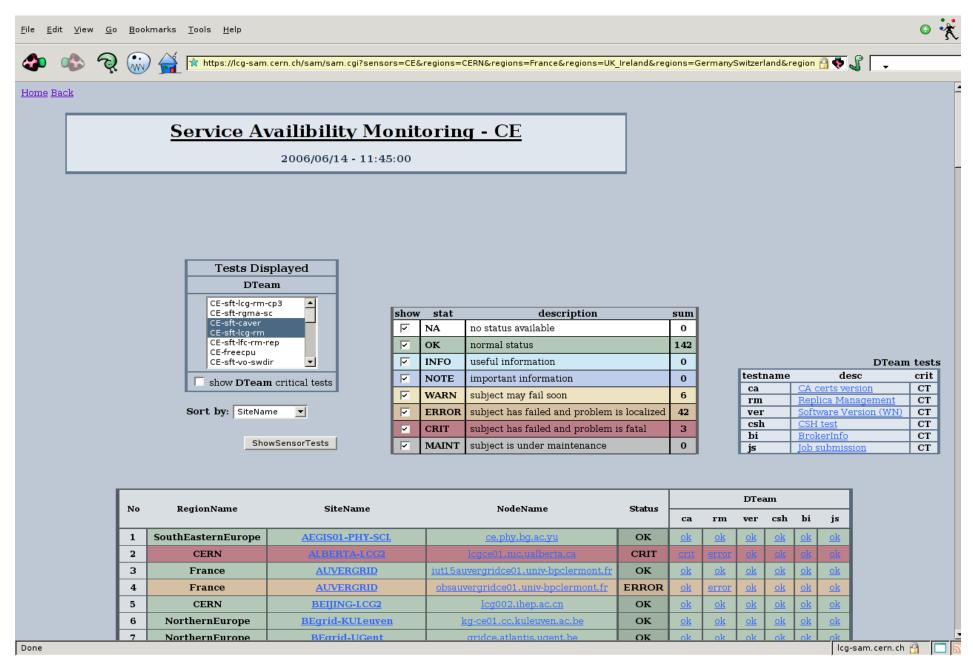














🛂 SAM -- Availability monitoring



- aggregation of results over a certain time
- site services: CE, SE, sBDII, SRM
- central services: FTS, LFC, RB
- status calculated in every hour → availability
 - current (last 24 hours), daily, weekly, monthly





- new version integrated with SAM
- new features
 - for every service one can select which test are critical
 - definition of the core services
 - site status information pages for users
- web services, Oracle