



Enabling Grids for E-science

EGEE Operational Procedures

(Contacts, procedures, certification)

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*Planning for Grid Deployment and Usage in South Africa
Meraka Institute, CSIR campus, Pretoria
12-13 may 2008*

www.eu-egee.org



Information Society
and Media



- **Extract from SA1 Operational Procedures Manual:**

“Staff within SA1, responsible for the daily operations of the EGEE grid, are broken up into the following areas:

Operations Team – COD and support tools developers

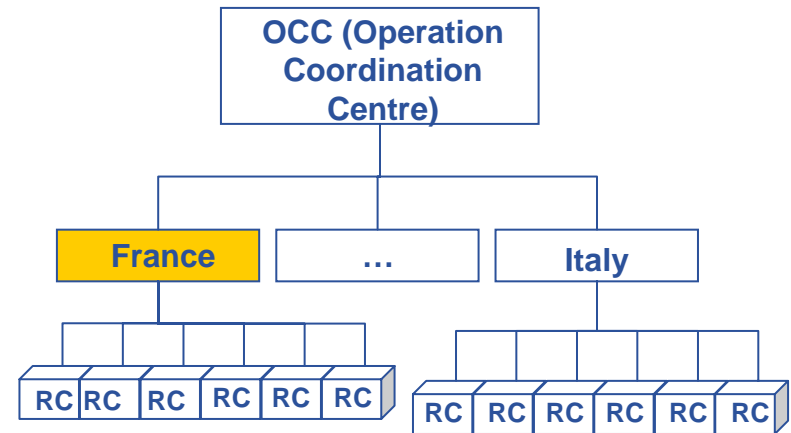
Regional Operations Centre – ROC Managers, ROC support staff

Resource Centres (sites) – local support, site admins

The Operations team is responsible for detecting problems, coordinating the diagnosis, and monitoring the problems through to resolution. This has to be done in cooperation with the Regional Operations Centres to allow for a hierarchical approach and overall management of tasks.”

<https://twiki.cern.ch/twiki/bin/view/EGEE/EGEEROperationalProcedures>

- **Site representative of a region/federation**
 - assistance to sites/RC in the region
 - site middleware deployment coordination
 - communication channel between project and sites
- **Regional security management**
- **Regional monitoring**
- **Incident support and follow-up**
- **Sites certification**
- **Users training**



- **Communication channel**
- **Incident support and follow-up**
- **Site creation**
- **Accounting**

- **Internal**

- Visio conferences (15 days)
 - French participants (SA1, NA4, RAG, etc.)
 - circulation of news
 - *exploitation coordination*
 - *minutes of EGEE meetings*
 - *etc.*
 - exchange area between French participants to EGEE
 - *specific topic meetings: security, certification authority, MPI, GGUS...*
- Mailing list EGEE SA1-Fr

- **External**

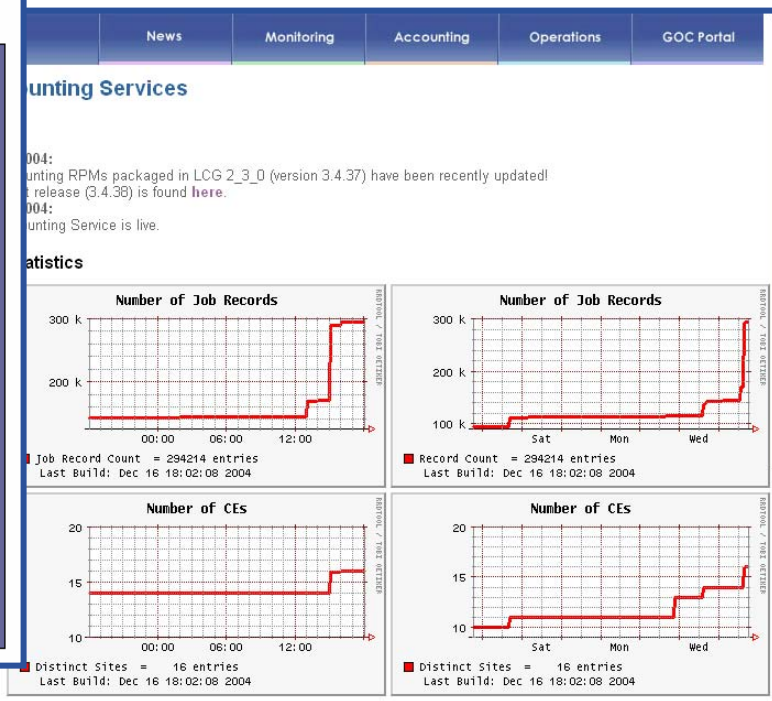
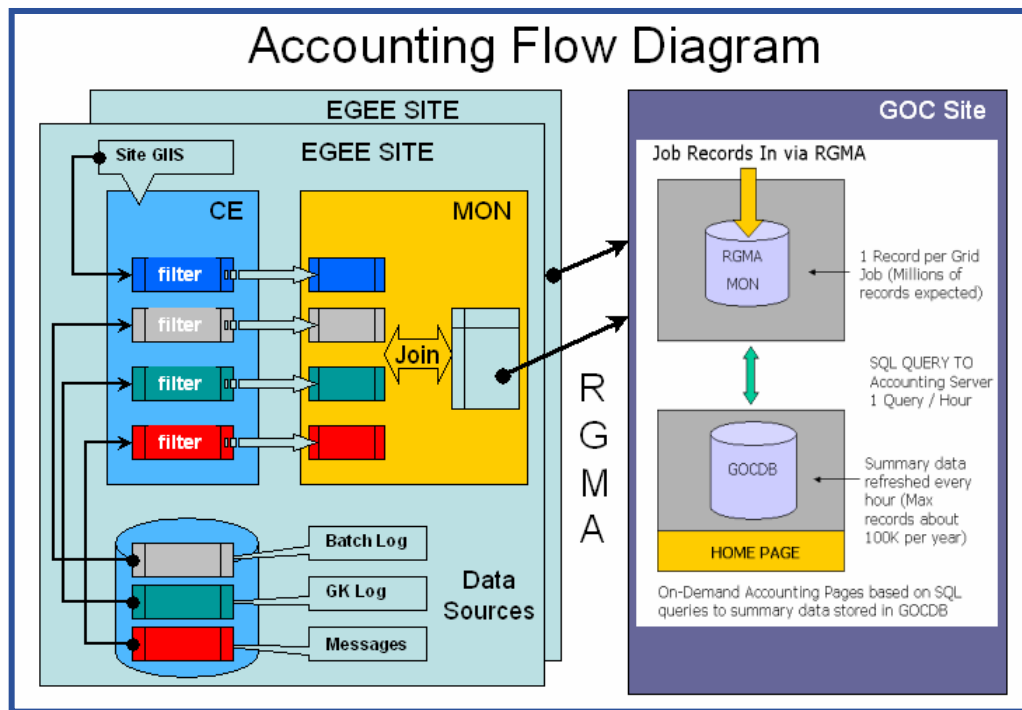
- “ROC Managers’ meeting” phone conference (15 days)
- “WLCG Weekly operation meeting” (weekly)
 - weekly report about French site status
- “All ROC managers meeting” (~ 3-4 months)

- **Support given by ROC is directly done through GGUS (Global Grid User Support) portal: <http://gus.fzk.de>**
 - ROC assigns GGUS ticket to concerned site support
 - Site support team need to be registered as “ROC support staff”
 - ROC is notified about tickets updates and can intervene when it is necessary
- **Interface between local helpdesk and GGUS is in progress**
- **Use of a specific mail address to be notified**
 - 4 people behind
 - first reader takes care of the ticket replying and/or assigning it to expert

- **Site candidate needs to contact its ROC**
- **ROC publish site candidature:**
 - creation of a new entry in the GOC DB
 - site status: “Candidate to production”
 - fact sheet to be filled by the new site
 - *site name on grid, site support and security contacts, etc.*
 - operational worksheet of site
 - *information system ldap URL of site, grid node list, “scheduled downtime” declaration, etc.*
 - ⇒ *used by grid tools: monitoring, information system, etc.*
 - ⇒ *to adapt functions of site status*
 - invitation to join SA1-Fr : visio conference, mailing list, etc.
- **Site deploys and configures the middleware,**
 - with ROC help if needed
 - can use tools provided by the project to test a site
 - **SAM Admin's Page** : <https://cic.gridops.org/index.php?section=roc&page=samadmin>
- **On site demand, ROC certifies the site**
 - use of tests framework provided by the project
 - **Service Availability Monitoring (SAM)** : <https://lcg-sam.cern.ch:8443/sam/sam.py>
 - when everything is OK, ROC pushes site in production
 - site status: “Certified for production”
- **If needed, ROC can take out of production a site changing its status in GOC DB.**

- Accounting

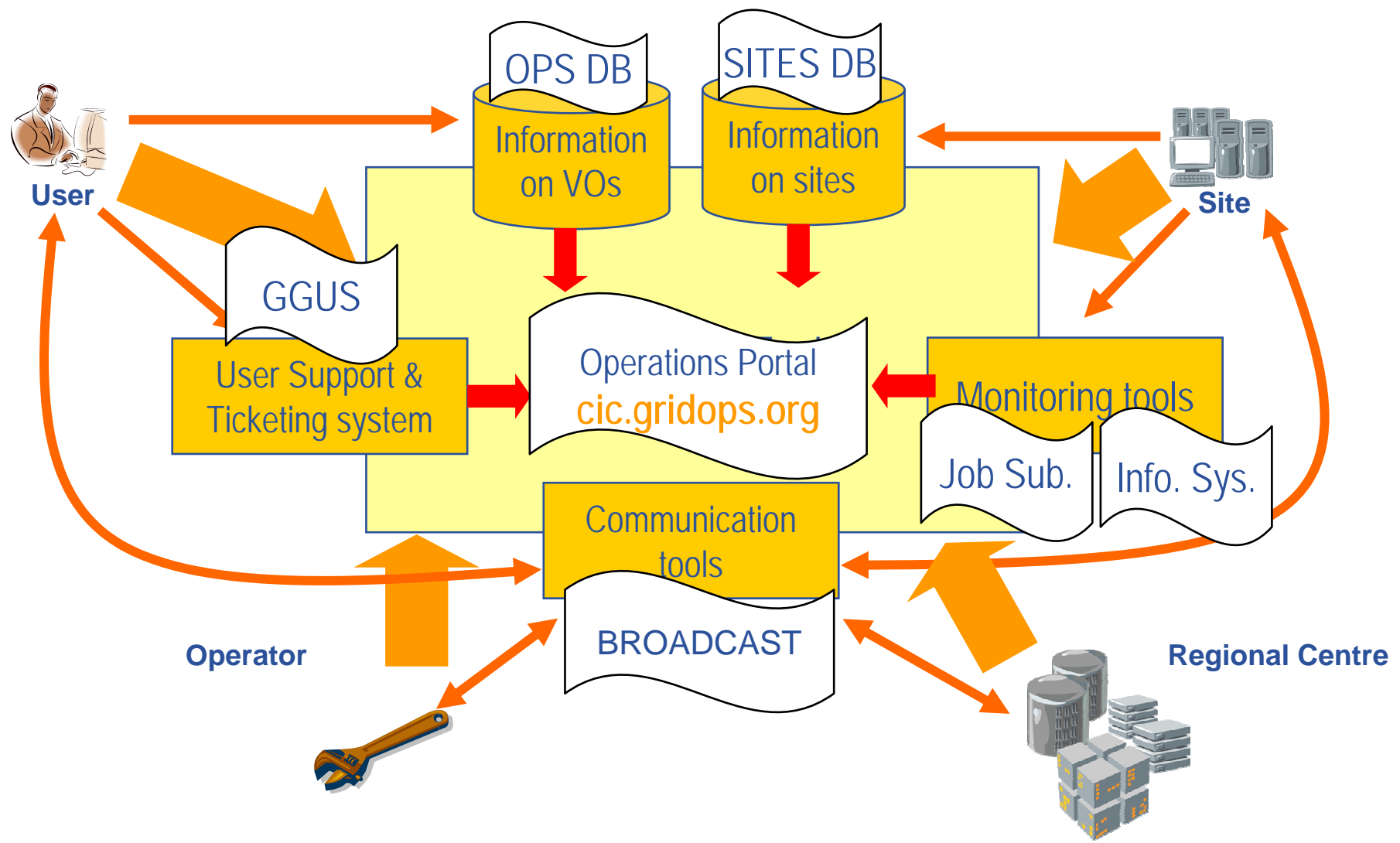
- http://www3.egee.cesga.es/gridsite/accounting/CESGA/egee_view.html
- based on R-GMA (Relational Grid Monitoring Architecture)
- deployed on every RC/sites

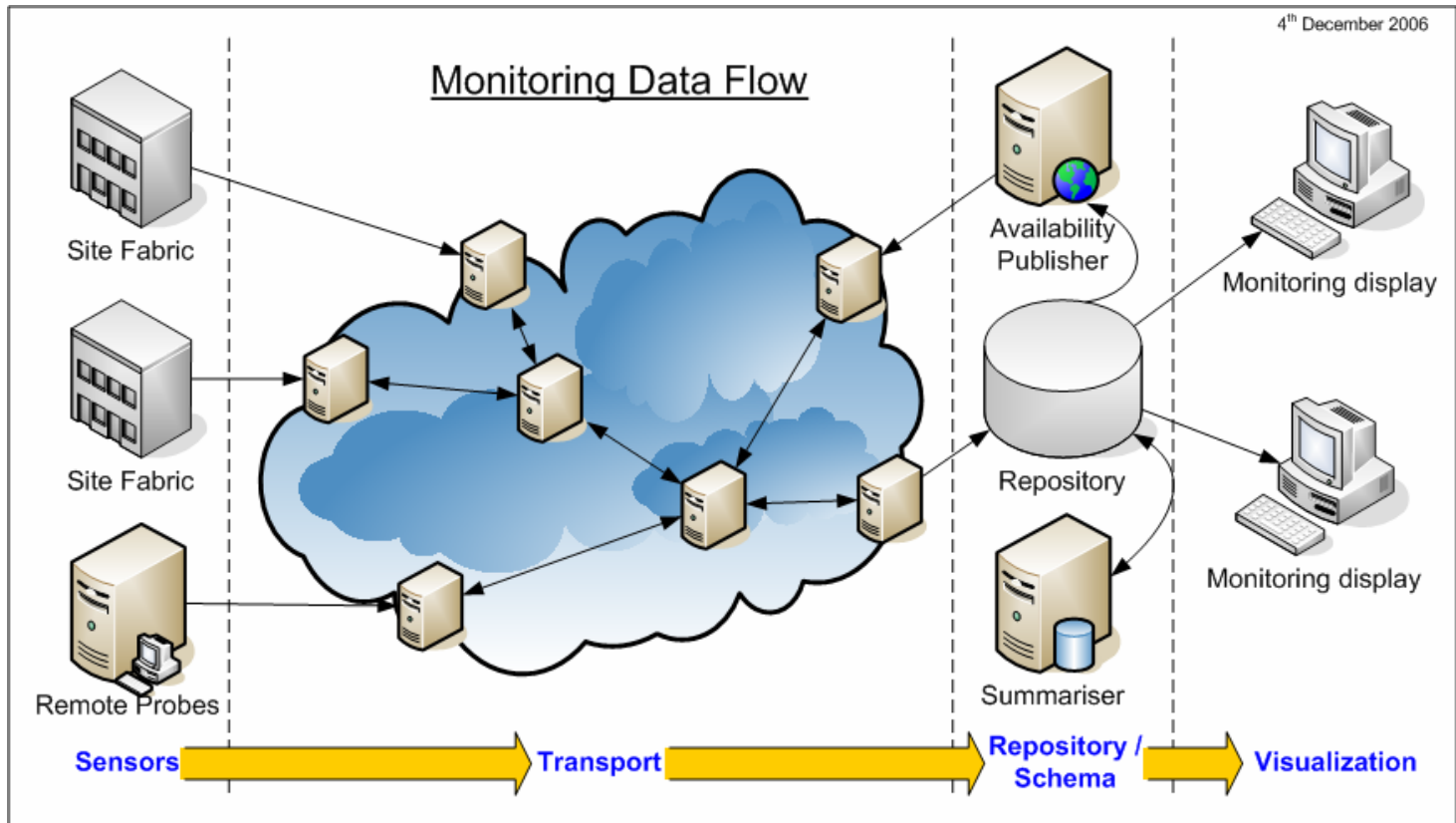


- **Source: GII monitor** (data retrieved on 29th April 2008)

ROC	Sites	Countries	Estimation Total CPU
CERN	14	8	8779
UKI	25	2	10985
Italy	36	1	7615
GermanySwitzerland	17	2	12686
France	14	1	16167
SouthEasternEurope	40	9	3782
CentralEurope	25	8	5297
NorthernEurope	28	9	4191
AsiaPacific	22	10	3490
SouthWesternEurope	20	2	2418
Russia	16	1	1657

- <https://goc.gridops.org/>
- **Central repository of site information (a.k.a. Grid Operations Centre) developed and operated by Rutherford Appleton Laboratory (RAL), UK.**
- **Keep a central repository of information on the components of the grid**
 - Site registry (name, location, contact information, administrator contact, security contact, ...)
 - Site status (candidate, uncertified, production, suspended, ...)
 - History of scheduled unavailability of the site
 - Grid services operated by the site: computing elements, storage elements, file catalogue services, virtual organization management services, resource brokers, etc.
 - Services that sites want to be monitored by the grid operators
By default, all nodes in a production site are monitored.
- **Updating this information is a shared responsibility between the site operator and the federation manager**

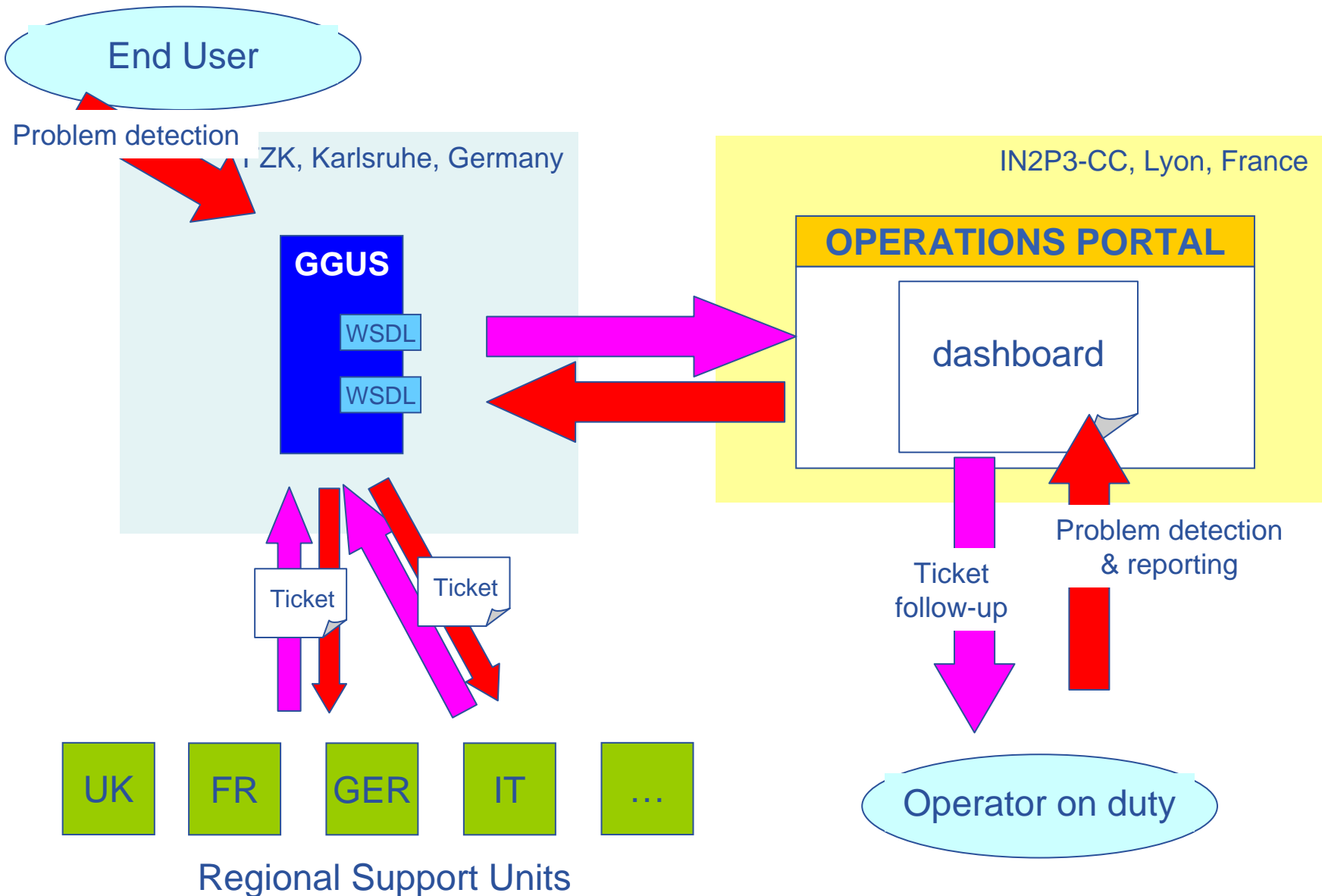




- **Grid operators have a global view of the status of the infrastructure**
 - Service of probes sent to every site to check it on a regular basis
 - Service for regularly testing the consistency of the dynamic information published by the site in the grid information system
 - Information on the result of those tests is available to grid operators, site managers and end-users
 - Virtual Organization managers can use this information to select a set of sites they intend to use
 - Monitoring services developed and operated by CERN, Academia Sinica (Taiwan), GridPP (UK) and INFN (Italy)

- **Sites failing the tests receive a problem ticket**
 - Escalation procedure for solving site-related problems
 - Involves the regional operator and the site operator

- <https://gus.fzk.de/>
- **Central incident tracking tool developed/operated by Forschungszentrum Karlsruhe (DE)**
 - Unique channel for opening tickets (e-mail and web interface)
 - End-users : e.g. job submission failures, data transfer failed
 - Operators : e.g. job submission failures
 - Classification and 1st assignment done by the Ticket Process Manager (TPM)
 - Tickets are assigned to support units - one per domain of expertise
 - Grid operators, applications, federations, m/w experts, ...



- <http://cic.gridops.org/>
- **Developed and operated by CC-IN2P3, failover instance at CNAF**
- **Web portal for integrating all the tools and sources of operations-related information into one single place**
 - Provides and maintains an integrated operations dashboard for grid on duty operator
 - Provides mechanisms for keeping information needed for appropriate hand over between operators on duty
 - Easy access to appropriate contact information on every actor involved in the operations of the grid
 - Provides communication tools



Identified with the following certificate : /O=GRID-FR/CO=FR/O=CNRS/OU=CC-LYON/CN=David Bouvet

You have been recognized as : Site Administrator, Deputy Regional Manager, CIC ONDUTY,

- Home
- VO
- RC
- ROC
- COD

Home

- Homepage
- COD Team Admin
- Contact us - Feedback
- Contacts
- On Duty Rotation Agenda

Procedures / Documentation

- COD Procedures
- Downtime Procedure
- CIC Portal Documentation

CIC Tools

- COD Dashboard
- Resource Comparator
- Resources distribution
- VO Information

External Tools

- Enoc Network Operation

Communication

- Broadcast Information
- Broadcast Retrieval
- Downtime Notification

Links

- PPS Information

Hello David!

You are on duty this week as **Lead Team**

User: David Bouvet

Identified as COD team for France

On Duty this week:

Lead team: France - Backup team: ND&F-Tier-1

- Home
- Tickets
- Alarms
- SD
- SAMAP
- Other Tools
- Handover
- IRC Chat
- Doc
- Preferences

New alarms (Lead team regions only)

Today is 29/04/2008, it is 14:21 UTC
Currently 19 New alarms

- MAINT** - Node or site is currently in Downtime
- INREG** - Node is not registered in the GOC-DB, or has monitoring switched off

ID	Test	Node	Network	status
<input type="checkbox"/>	146961	CE-sft-job	ce1.egee.fr.cgg.com	- error
<input type="checkbox"/>	146491	LFC-host-cert-valid	rb1.egee.fr.cgg.com	- error
<input type="checkbox"/>	146486	RB-host-cert-valid	rb1.egee.fr.cgg.com	- error
<input type="checkbox"/>	146498	RGMA-host-cert-valid	mon1.egee.fr.cgg.com	- error
<input type="checkbox"/>	146497	LFC-host-cert-valid	lfo.egee.fr.cgg.com	- error
<input type="checkbox"/>	146990	CE-sft-lcg-rm	gridce.ioc.cnr.it	- ok
<input type="checkbox"/>	147053	CE-sft-lcg-rm	sbgoe1.in2p3.fr	- error
<input type="checkbox"/>	147037	SE-lcg-op	pooms2.cmsfarm1.ba.infn.it	- error
<input type="checkbox"/>	147054	CE-sft-lcg-rm	t2-ce-01.inl.infn.it	- error
<input type="checkbox"/>	146966	CE-sft-job	gridce2.pi.infn.it	- error

Set selected alarms to off

Set status to "off"

All alarm with last test status =

Top of page

Open GGUS tickets (Lead team regions only)

View ticket id:

List updated on Tue, 29 Apr 2008 16:20:11 CEST

ID	Node	Alarm	test status	Gstat	Last escalation	Expires on
7916	beagle14.ba.itb.cnr.it	143914	maint	OFF	Solved by ROC	2008-04-30
7893	fusce.frascati.enea.it	143195	maint	OK	1st mail to site admins	2008-04-30
7873	grid001.fi.infn.it	141854	maint	MAINT	Quarantine	2008-04-30
7808	grid-mon.physik.rwth-aachen.de	137848	ok	WARN	Quarantine	2008-04-30
7798	dpm.grid.hku.hk	136937	error	NOTE	Quarantine	2008-04-30
6062	armgrid3.yerphi.am	70567	error	OK	Case transferred to political instances	2008-04-30
7933	hephygr.oeav.ac.at	145582	ok	OK	1st mail to site admins	2008-05-01
7932	grid-ce.lns.infn.it	144723	error	OK	Solved by ROC	2008-05-01
7931	diana.switch.ch	145271	ok	ERROR	Solved by ROC	2008-05-01
7930	log002.ihep.ac.cn	145407	ok	INFO	Solved by ROC	2008-05-01
7929	wormhole.westgrid.ca	145210	ok	ERROR	Solved by ROC	2008-05-01
7928	grid-se.lns.infn.it	144706	ok	OK	Solved by ROC	2008-05-01
7926	gridbdl.pi.infn.it	143876	warn	ERROR	1st mail to site admins	2008-05-01
7925	grid01.ge.infn.it	143757	error	OK	1st mail to site admins	2008-05-01
7924	io-kit-hogoe.rz.uni-karlsruhe.de	143415	ok	ERROR	Solved by ROC	2008-05-01
7923	lfo.sdfarm.kr	145212	error	ERROR	1st mail to site admins	2008-05-01
7922	testbed002.phys.sinica.edu.tw	145517	ok	INFO	1st mail to site admins	2008-05-01
7921	atlasse01.ihep.ac.cn	142230	error	INFO	1st mail to site admins	2008-05-01
7673	grid-srm.physik.rwth-aachen.de	132640	error	WARN	2nd mail to site admins	2008-05-01
7948	egoeaix.frascati.enea.it	146170	ok	OK	1st mail to site admins	2008-05-02
7947	log-se.rcf.uvic.ca	145891	error	OK	1st mail to site admins	2008-05-02
7946	grid002.ca.infn.it	145965	maint	MAINT	1st mail to site admins	2008-05-02
7945	logce.ijs.si	145727	ok	OK	Solved by ROC	2008-05-02
7944	bdllsrv.gridcenter.or.kr	145866	error	ERROR	1st mail to site admins	2008-05-02
7892	lfo-lhcb-ro.cfnf.infn.it	143077	error	OK	1st mail to site admins	2008-05-02
7834	gridce.sns.it	140048	ok	OK	Unsolvable	2008-05-02

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Alarm #147037

Alarm details		Related information	
Impacted node	pccms2.cmsfarm1.ba.infn.it	Related alarms	
Belongs to site	INFN-BARI	<input type="text"/> ID <input type="text"/> Test <input type="text"/> Alarm Status <input type="text"/> Test status <input type="text"/> link	
Test that failed	SE-icg-cp	Tickets already opened for INFN-BARI	
Tested for VO	OPS	<input type="text"/> ID <input type="text"/> GGUS ID <input type="text"/> Node <input type="text"/> Type of problem <input type="text"/> Last escalation <input type="text"/> Expires on <input type="text"/> Priority	
Tested on	14:04:05 (UTC)	Notes about INFN-BARI (Last modified on 08/04/2008 00:00)	
Current test status	error	They publish a CREAM CE with the tcp port 8443. GIS expect port 2119 and gives a syntax error even the value is correct for cream.	
Alarm status	new	<input type="button" value="Add/modify"/>	
Alarm last updated on	14:04:18 (UTC)	Gstat status for INFN-BARI: <input type="button" value="OK"/>	
Alarm history		Network problems for node and site	
Modification time (UTC)	Alarm Status	Node status (pccms2.cmsfarm1.ba.infn.it): no problem reported Site status (INFN-BARI): no problem reported View history View network status of all nodes on this site	
2008-04-29 14:04	new		
Actions			
Set alarm status to "off"	<input type="button" value="Go"/>		
Mask this alarm by alarm:	<input type="text"/> <input type="button" value="Go"/>		

Create GGUS ticket and contact INFN-BARI (SE problem on pccms2.cmsfarm1.ba.infn.it)

Subject: SE failure on pccms2.cmsfarm1.ba.infn.it (INFN-BARI) GGUS ticket number will automatically be added



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Scheduled downtimes (Lead team regions only)

View GOC downtimes page on the GOC portal

Following sites are currently in scheduled maintenance:

Note : in grey are infinite downtimes, or scheduled downtimes that could be bad declared (with a weird duration)

At Site level (all site in SD) :

Site	start date	end date	description
AMD64.PSNC.PL	12/03/2008 10:09	12/03/2009 10:09	This is going to be shut down and replaced with PSNC.
AUVERGRID	29/04/2008 14:50	29/04/2008 17:50	Network Maintenance on Auvergrid Site
egee.grid.nifi.ju	25/04/2008 08:00	06/05/2008 12:00	WN upgrade to 3.1.
egee.man.poznan.pl	07/04/2008 09:05	08/04/2009 15:00	This site is going to be shut down and replaced by PSNC.
FMPH-UNIBA	01/04/2008 03:01	01/05/2008 12:00	Still experiencing problems with configuration
INFN-CAGLIARI	29/04/2008 11:41	07/05/2008 11:41	Site close
INFN-FERRARA	24/04/2008 07:23	05/05/2008 15:23	maintenance
INFN-FIRENZE	28/04/2008 23:03	15/06/2008 23:03	Site support temporary unavailable
INFN-NAPOLI-CMS	25/03/2008 11:01	07/05/2008 11:01	farm upgrade
INFN-PERUGIA	24/04/2008 17:00	02/05/2008 17:00	Farm software upgrades
ITB-BARI	28/04/2008 09:27	05/05/2008 09:27	maintenance cooling system
SPACL-CS-IA64	29/04/2008 12:14	05/05/2008 12:14	site unattended
SPACL-NAPOLI	07/04/2008 18:00	06/05/2008 18:00	Power interruption for extraordinary maintenance
Taiwan-PPS	28/04/2008 08:00	30/04/2008 08:00	This downtime is just for GStat test purpose
TW-THU-HPC	17/04/2008 15:06	30/04/2008 15:06	need time to solve firewall issue

At node level (only one node in SD) :

Site	Node	start date	end date	description
DESY-ZN	globe-ce1.ift.de	14/01/2008 10:13	01/01/2011 00:00	This is just a test CE!
IBCP-GBIO	grive12.ibcp.fr	02/04/2008 14:16	10/05/2008 12:00	SRM failure
egee.man.poznan.pl	ce.egee.man.poznan.pl	08/04/2008 13:55	01/03/2009 11:55	This site is going to be shut down and replaced by PSNC site.
HEPHY-UIBK	test-gliteCE.uibk.ac.at	08/04/2008 14:00	07/05/2008 13:00	Testbed
HEPHY-UIBK	test-lcgCE.uibk.ac.at	08/04/2008 14:00	07/05/2008 13:00	Testbed
HEPHY-UIBK	test-dpm.uibk.ac.at	08/04/2008 14:00	07/05/2008 13:00	Testbed
CERN-PROD	ce112.cern.ch	17/04/2008 11:26	10/05/2008 11:26	draining for hardware replacement

Service Availability Monitoring - gRB

rb118.cern.ch - CERN-PROD (CERN)

2007/06/20 - 04:58:01

Tests Displayed

ops

gRB-host-cert-valid

show ops critical tests

Display limit (days): 5

ShowHistory

show	stat	description	sum
<input checked="" type="checkbox"/>	NA	no status available	0
<input checked="" type="checkbox"/>	OK	normal status	100
<input checked="" type="checkbox"/>	INFO	useful information	0
<input checked="" type="checkbox"/>	NOTE	important information	0
<input checked="" type="checkbox"/>	WARN	subject may fail soon	0
<input checked="" type="checkbox"/>	ERROR	subject has failed and problem is localized	1
<input checked="" type="checkbox"/>	CRIT	subject has failed and problem is fatal	0
<input checked="" type="checkbox"/>	MAINT	subject is under maintenance	0

No	Timestamp (submission time)	Status	ops
			cert
1	20-Jun-2007 04:14:13	OK	ok
2	20-Jun-2007 03:11:53	OK	ok
3	20-Jun-2007 02:18:42	OK	ok
4	20-Jun-2007 01:19:07	OK	ok
5	20-Jun-2007 00:23:30	OK	ok
6	19-Jun-2007 23:20:50	ERROR	error

testname	desc	ops tests
cert	Test if the service host certificate is valid.	CT

[Home](#)

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SAM test: gRB-host-cert-valid
 Submitter VO: ops
 Node: rb118.cern.ch
 Execution time: 19-Jun-2007 23:20:50

Current time: Tue, 19 Jun 2007 23:19:50 +0000

Checking rb118.cern.ch (128.142.173.154:2811) using GSIFTP protocol
 Timeout after 60 seconds

Contact: SAM Support Mailing List (sam-support@cern.ch)

Last modified: May 24 2007, 16:28

VOMS Server certificate public key

[Download](#)

VOMS server certificate DII:
 IO=GRID-FR/C=FR/IO=CNRS/OU=CC-LYON/CN=cclcgvomsl101.in2p3.fr/IO=GRID-FR/C=FR/IO=CNRS/OU=CC-LYON/CN=cclcgvomsl101.in2p3.fr

This certificate expires on: 15/02/2009 09:42

VOMS Groups and Roles ?

Group/role	Description	Is this group used for configuration
/biomed/Role=VO-Admin	administrator	yes
/biomed/bioinformatics	gene sequences analysis related applications	yes
/biomed/drug_discovery	in silico drug discovery related applications	yes
/biomed/lcg1	default group	yes
/biomed/medical_imaging	medical image processing related applications	yes

CONTACTS

Generic contacts

Generic contact for VO admins	egee-biomed-vo-manager@healthgrid.org	?
Operational contact		?
Contact for User Support	biomed-grid-support@cern.ch	?
Mailing list for VO Users	project-eu-egee-na4-biomed-applications@cern.ch	?

Managers, Deputies and Experts list ?

Last name	First name	E-mail	Profile	Role/comments
Legre	Yannick	legre@clermont.in2p3.fr	VO MANAGER	
Blanchet	Christophe	Christophe.Blanchet@ibcp.fr	VO EXPERT	
Montagnat	Johan	johan@3s.unice.fr	VO EXPERT	

RESOURCES AND OTHER INFORMATIONS

Number of Users	135	?
Job CPU limit	min/1000S12K	?
Job Wall Clock Time Limit	mn	?
Job Scratch Space (GB)	GB	?
Per-SE Storage Space (GB)	GB	?
RAM per CPU core (MB)	MB	?
Minimum number of job slots needed		?

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 - Getting started with Grid
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 - Security Issues
 - Site Procedure
 - CIC Portal Documentation
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- CIC Tools**
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 - Resources Distribution
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- External Tools**
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 - Enoc Network Operation
 - Freedom of choice FCR
 - SAM Admin Page
 - Yaim Configurator
-
- Communication**
- Alarm Notification
 - Broadcast Information**
 - Broadcast Retrieval
 - Downtime Notification
-
- Links**
- Find a User Support
 - PPS Information

EGEE BROADCAST

Contact all the EGEE Communities - Publish News on the CIC Portal

PLEASE, DON'T USE ANY MORE THE EGEE BROADCAST FOR DOWNTIME ANNOUNCEMENTS.
General details on the new downtime procedure are available Here

Sender Information : RC MANAGER / ADMINISTRATOR

Name:

e-mail address:

Name of your site:

BROADCASTING INFORMATION

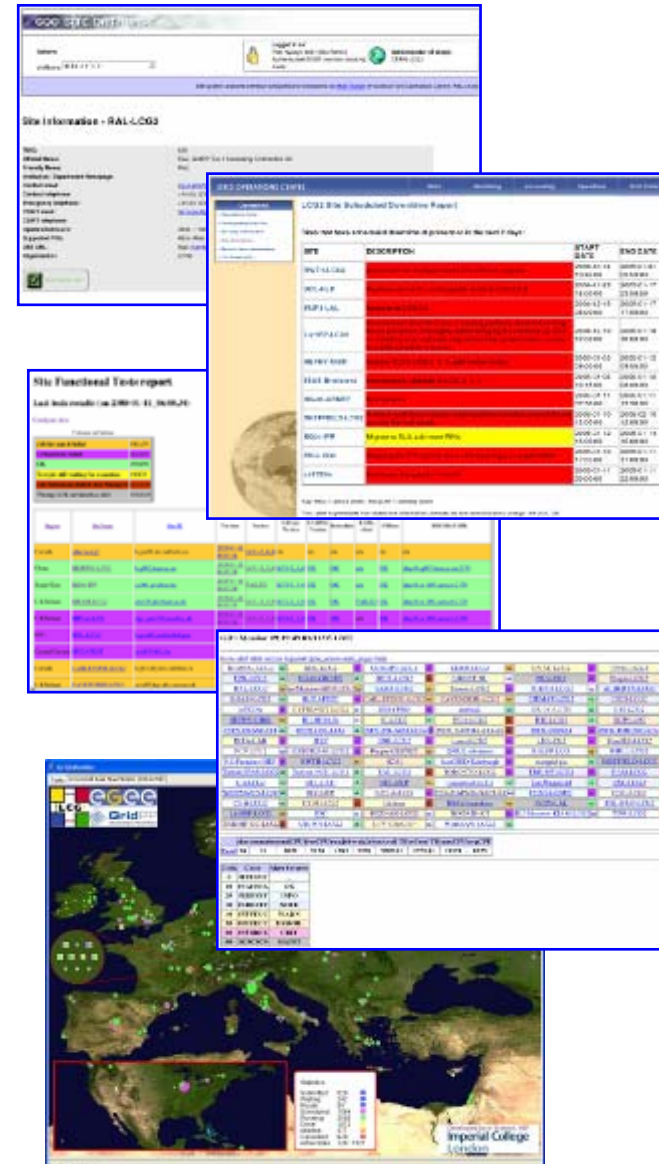
News publication in all CIC portal views: NO YES

Add the broadcast in the public archive NO YES

TARGET(s) :	DATA TO PUBLISH	RECIPIENT(s)
<input type="checkbox"/> WLCG Tier-1 contacts [RSS Feed] <input type="checkbox"/> CIC-on-duty mailing list [RSS Feed] <input type="checkbox"/> OSG (Open Science Grid) [RSS Feed] To ROC Managers <input type="checkbox"/> <input type="button" value="<D>"/> Customize your Request [RSS Feed] To VO managers <input type="checkbox"/> <input type="button" value="<D>"/> Customize your Request [RSS Feed] To VOs Users <input type="checkbox"/> <input type="button" value="<D>"/> Customize your Request [RSS Feed] To Production Site Admin <input type="checkbox"/> <input type="button" value="<D>"/> Customize your Request [RSS Feed]	<p style="text-align: center;">Send me a confirmation <input checked="" type="checkbox"/></p> <p>Cc' : <input type="text"/></p> <p>Bcc' : <input type="text"/></p> <p><small>* Warning : if you use the Cc/Bcc field you should separate each user with a comma</small></p> <p>News title / mail subject: <input type="text"/></p> <div style="border: 1px solid gray; height: 150px; margin-top: 10px;"> <p>News contents / mail body</p> </div>	
<input type="button" value="RESET"/> <input type="button" value="Publish and send"/>		

** Be careful the size of mail is limited to 3900 characters

- **COD operators**
 - weekly rota on ROC to give an operator team (CIC On Duty)
- **User support : GGUS**
 - <https://gus.fzk.de/pages/home.php>
- **Monitoring tools:**
 - CIC portal
 - <http://cic.gridops.org/>
 - *entry point to the other tools*
 - *integrated view for COD operator use*
 - Service Availability Monitoring (SAM)
 - <https://lcg-sam.cern.ch:8443/sam/sam.py>
 - Grid Operations Centre Core Database (GOCDB)
 - <https://goc.gridops.org/>
 - GIIS monitor (Gstat)
 - <http://goc.grid.sinica.edu.tw/gstat>
 - GOC monitoring tools
 - http://www.gridpp.ac.uk/wiki/Links_Monitoring_pages
 - GOC job real time monitor
 - <http://gridportal.hep.ph.ic.ac.uk/rtm/>
- **Accounting**
 - http://www3.egee.cesga.es/gridsite/accounting/CESGA/egee_view.html



Browser tabs: Security polic..., Presentation..., http://dashb-atlas-prodsys.cern.ch/dashboard/request.py/overview?grouping=cluster&start-date=2008-05-05%2000:00:00&end-d... GridPMA

Browser tabs: Security polic..., Presentation..., Planning for..., GGU5 - /resu..., CC-IN2P3 us..., L1 docservices:..., GGU5 - /ticks..., GGU5: ID#3..., GGU5: ID#3..., http://...&d132, GGU5: ID#3..., Dashbo...

OVERVIEW

- view
- by grid
- by cloud
- by_dest_cloud
- by_executortype
- by_executor
- by site
- by cluster
- by task

select cluster

- uct2-grid6.mwt2.org
- ce01.tier2.hep.manchester...
- benedict.grid.aau.dk
- atlasce01.na.infn.it
- agh2.atlas.unimelb.edu.au
- atlasce.lnf.infn.it
- grid.uio.no
- ce.glite.ecdf.ed.ac.uk
- ce0001.m45.ihep.su
- logce01.jinr.ru
- cluster.pnpi.nw.ru
- logce01.cpp.ualberta.ca
- arc01.lcg.cscs.ch
- ce05-lcg.cr.cnaf.infn.it
- bigmac-lcg-ce.physics.utoronto.ca
- atlas.bu.edu
- svr021.gla.scotgrid.ac.uk
- ce01.dur.scotgrid.ac.uk
- ce1.triumf.ca

EXEP
DQ2F
FILEC

EPAND
I2PUT
ECOPI

Tasks **ATLAS dashboard**

Data: Tier 0 Data: Production Prodsys: Production

Overview Dataset Info Page Help User Guide Feedback

OVERVIEW

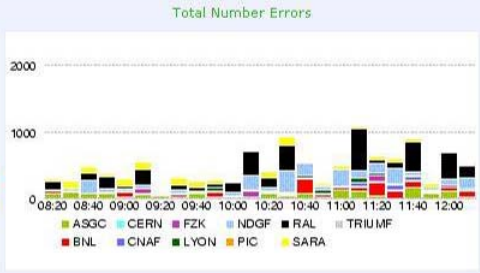
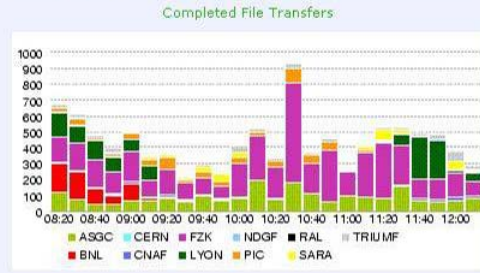
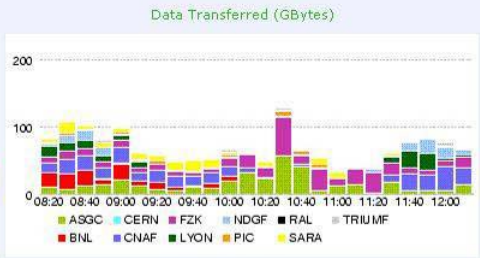
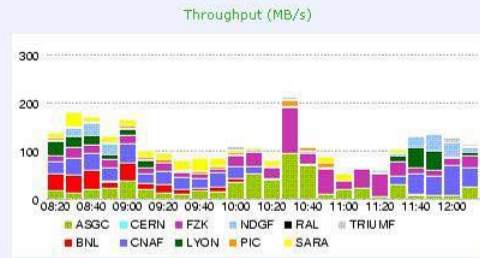
50K
40K
30K
20K
10K
0

OVERVIEW Activity

- Activity in Last Hour
- Activity in Last 4 Hours
- Activity in Last 24 Hours
- Activity in Last 7 Days
- Activity in Last 30 Days
- Activity in ...

Cloud Activity

- ASGC Cloud
- BNL Cloud
- CERN Cloud
- CNAF Cloud
- FZK Cloud
- LYON Cloud
- NDGF Cloud
- PIC Cloud
- RAL Cloud
- SARA Cloud
- TRIUMF Cloud



Activity Summary (Last 4 Hours)
Click on the cloud name to view list of sites

Cloud	Transfers				Services		Errors			
	Efficiency	Throughput	Files Done	Datasets Done	DQ	Grid	Transfer	Local	Remote	Central
ASGC	63%	24 MB/s	2026	4			1206	0		
BNL	26%	8 MB/s	477	167			1343	0		
CERN	10%	0 MB/s	12	1			107	0		
CNAF	39%	23 MB/s	156	0			239	0		
FZK	90%	26 MB/s	4682	154			528	0		
LYON	76%	8 MB/s	1222	77			394	0		
NDGF	10%	9 MB/s	272	0			2412	0		
PIC	100%	4 MB/s	670	38			3	0		
RAL	0%	0 MB/s	0	5			3596	0		
SARA	20%	9 MB/s	354	0			1403	0		
TRIUMF	97%	3 MB/s	473	29			13	0		

CRITICAL WARNING NORMAL GOOD NO_ACTIVITY