

Accounting and Monitoring

*Javier Lopez Cacheiro / CESGA
int.eu.grid KoM*

- **Information System (IS)**
 - BDII
 - RGMA
- **Monitoring tools**
 - GSTAT
 - SFT
 - GridICE
 - Operational Procedure
- **Accounting**
 - APEL
 - EGEE View
 - CPU Normalization

Information Systems available in EGEE:

- **BDII**
- **RGMA**

Both are available in gLite 3.0

- **Based on LDAP**
- **Uses GIP**
- **A lot of different names:**
 - MDS
 - GRIS
 - Extended GRIS
 - GIIS
 - Site BDII
 - Top BDII
- **No Security**
 - Everybody can consume the data
- **Main LCG Information System**

- **Complies with the GMA standard from GGF**
- **Syntax very similar to SQL**
- **Architecture**
 - Producer/Consumer
 - Schema
 - Registry
- **Secondary producer**
 - Flexible Archiver
- **Security**
 - Secure Connectors: Grid Certificate required to consume the data
- **Reliability issues** 😞
- **Main gLite Information System (not anymore?)**

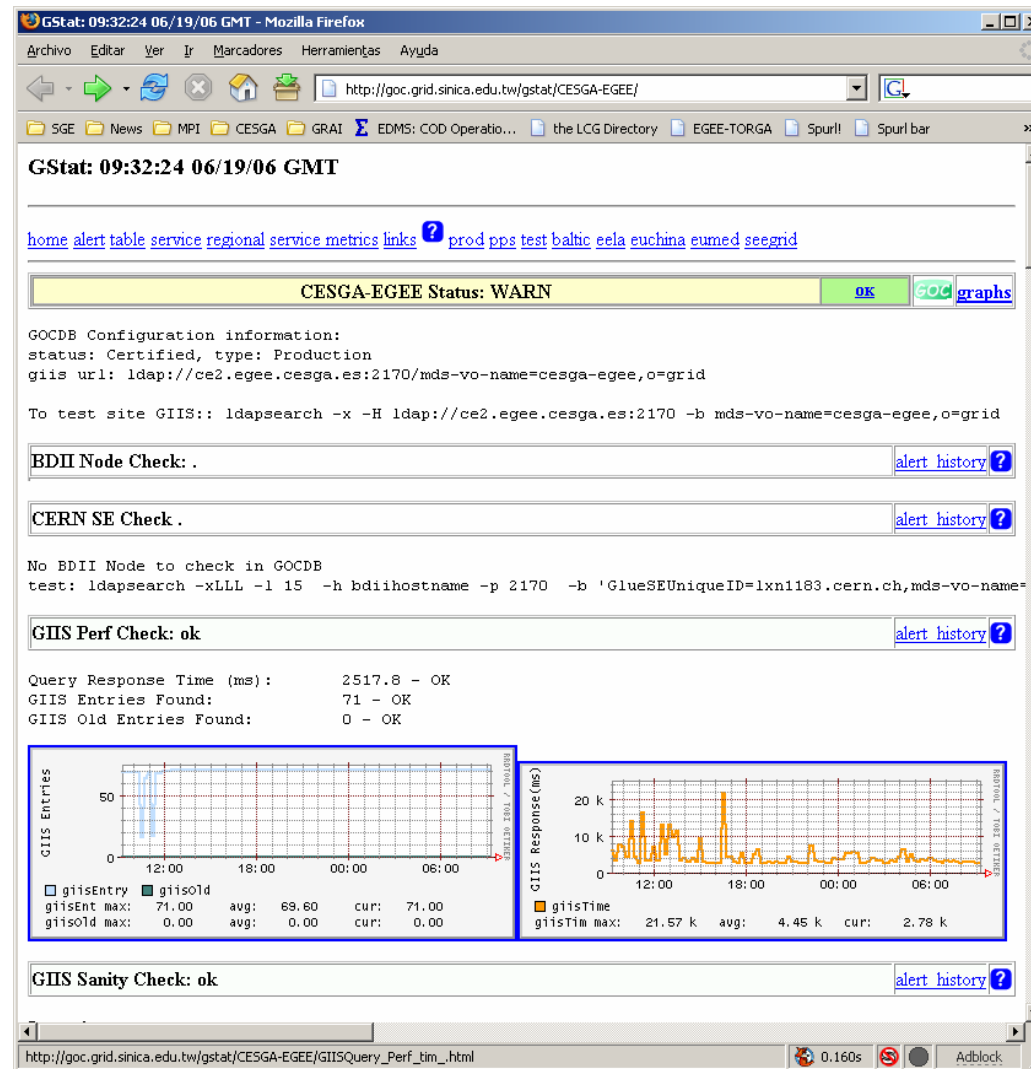
- **What is monitoring?**
- **What is accounting?**
- **What are the differences between Monitoring and Accounting?**

- **GSTAT**
- **SFT**
- **GridICE**
- **Real Time Grid Monitor**
- **SWE Monitoring Services**
- **Local Farm Monitoring**
- **Operational Procedure**

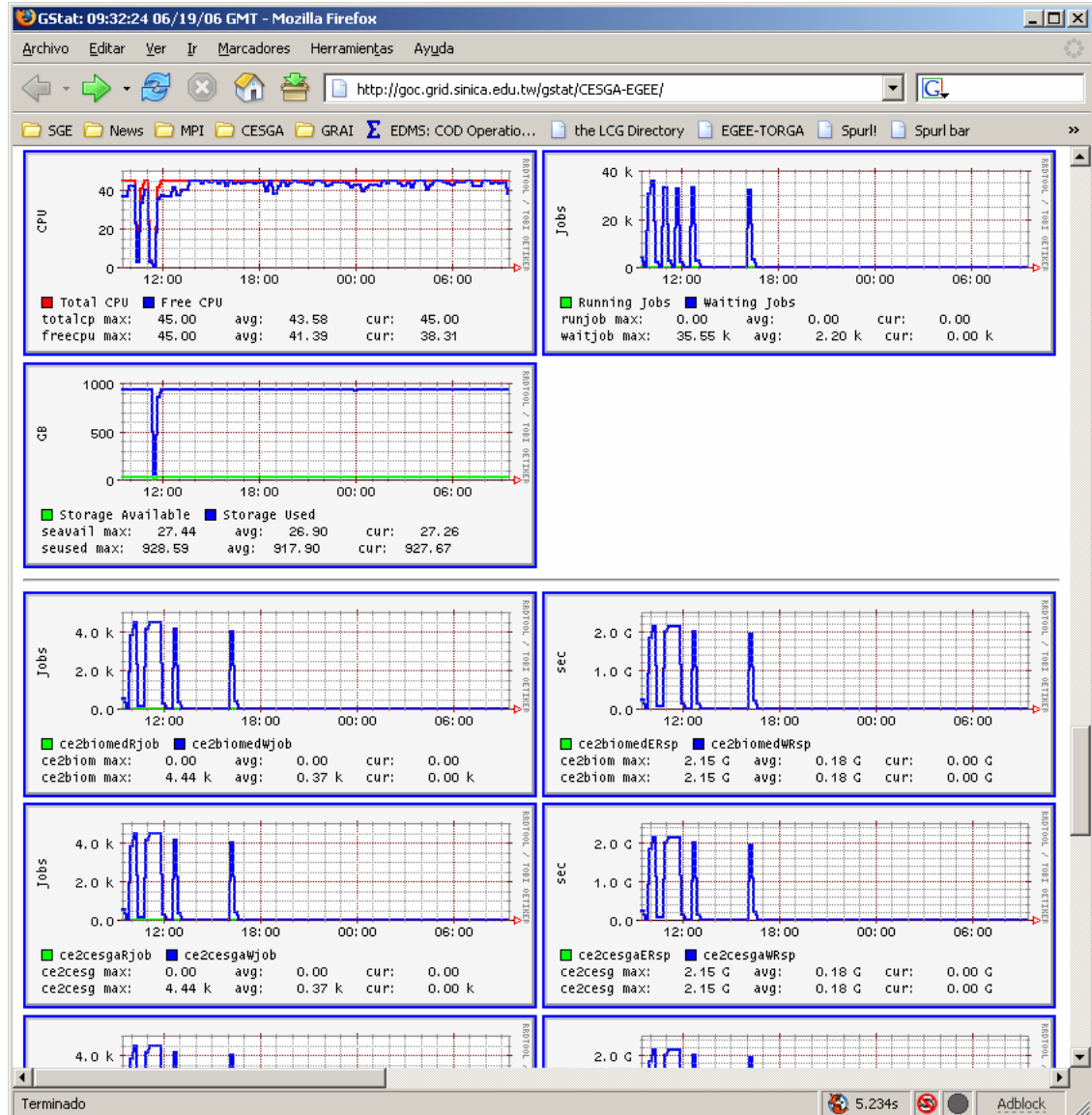
GSTAT

Checks BDII Information

- Number of entries
- Old entries
 - Indicate the BDII is not being updated
- Query response time
 - Indication of network (from Taiwan) and server loading
 - Slow response time can be detrimental to services that rely on BDII



- Total/Free CPU
- Running/Waiting Jobs
- Storage Available/Used
- Jobs per VO



Global Stats

- # Sites
- # CPUs
- Storage

GStat: 09:44:09 06/19/06 GMT - Mozilla Firefox

http://goc.grid.sinica.edu.tw/gstat/index.html

ID	Name	URL	OK	Warn	Error	State	CPUs	Free	Run	Wait	Job	seAvail TB	seUsed TB	maxCPU	avgCPU		
156	TW-THU-HPC	ce.hpc.cnie.thu.edu.tw	ok	ok	ok	LOG-2 7 0	2	2	0	0	0	0.04	0.00	2	1		
157	UAM-LCG2	grid003.ft.uam.es	ok	ok	ok	LOG-2 7 0	116	3	125	0	21.61	3.95	119	103	OK		
158	UB-LCG2	lcg-ce.ecm.ub.es	ok	ok	ok	LOG-2 6 0	109	32	65	0	0.04	0.00	111	94	CT		
159	UCL-CCC	ce-a.ccc.ucl.ac.uk			error	na								4	0		
160	UIOWA-LCG2	lcg-ce.its.uiowa.edu	ok	ok	ok	GLITE-3 0 0	10	10	0	0	0.72	0.17	10	7	SD		
161	UKI-LT2-Brunei	dgc-grid-35.brunei.ac.uk	ok	ok	ok	GLITE-3 0 0	126	1	123	15	1.41	0.04	128	109	OK		
162	UKI-LT2-IC-HEP	gw39.hep.ph.ic.ac.uk	ok	ok	note	GLITE-3 0 1	60	1	59	1	1.77	6.53	60	55	OK		
163	UKI-LT2-IC-LaSC	mars-ce.mars.lsc.doc.ic.ac.uk	ok	ok	ok	LOG-2 7 0	338	232	135	0	0.00	0.01	352	332	OK		
164	UKI-LT2-RHUL	ce.l.pp.rhul.ac.uk	ok	ok	ok	LOG-2 7 0	132	93	28	0	2.38	0.28	136	128	OK		
165	UKI-LT2-UCL-CENTRAL	gw-1.ccc.ucl.ac.uk	ok	ok	ok	GLITE-3 0 0	352	0	350	19027	0.99	0.00	356	216	OK		
166	UKI-LT2-UCL-HEP	pc90.hep.ucl.ac.uk	ok	ok	ok	LOG-2 7 0	120	91	20	0	0.01	0.02	136	125	OK		
167	UKI-NORTHGRID-LANCS-HEP	tal-pygrid-18.lancs.ac.uk	ok	ok	ok	GLITE-3 0 0	366	105	311	0	37.31	12.19	372	267	OK		
168	UKI-NORTHGRID-LIV-HEP	hepgrid2.ph.liv.ac.uk	ok	ok	ok	LOG-2 7 0	492	24	468	8	2.62	0.02	497	480	OK		
169	UKI-NORTHGRID-MAN-HEP	ce01.tier2.hep.manchester.ac.uk	ok	ok	ok	GLITE-3 0 0	556	165	375	0	60.55	1.74	594	458	CT		
170	UKI-NORTHGRID-SHEF-HEP	legpe0.shef.ac.uk	ok	warn	error	GLITE-3 0 0	0	99	155				34	23	SD		
171	UKI-SOUTHGRID-BHAM-HEP	eggee1.ph.bham.ac.uk	ok	ok	ok	GLITE-3 0 0	28	10	19	27	1.07	0.64	28	27	OK		
172	UKI-SOUTHGRID-BRIS-HEP	legce01.phy.bris.ac.uk	ok	ok	ok	GLITE-3 0 0	16	1	15	6	0.15	0.02	16	15	OK		
173	UKI-SOUTHGRID-CAM-HEP	serv03.hep.phy.cam.ac.uk	ok	ok	ok	LOG-2 7 0	43	29	126	49	2.95	0.18	43	42	OK		
174	UKI-SOUTHGRID-OX-HEP	t2ce02.physics.ox.ac.uk	ok	ok	ok	GLITE-3 0 0	66	7	107	38	2.47	0.61	72	64	OK		
175	UKI-SOUTHGRID-RALPP	site-bdi.pp.rl.ac.uk	ok	ok	ok	LOG-2 7 0	62	0	60	179	5.68	0.67	62	61	OK		
176	Umontreal-LCG2	lcg-ce.lps.umontreal.ca	ok	ok	ok	GLITE-3 0 0	10	6	4	0	1.28	0.96	10	9	OK		
177	UNI-DORTMUND	e5grid06.physik.uni-dortmund.de	ok	ok	ok	GLITE-3 0 0	48	6	40	6	0.02	0.38	60	41	OK		
178	UNI-FREIBURG	ce.bfg.uni-freiburg.de	ok	ok	ok	LOG-2 6 0	92	88	5	0	0	0	94	93	CT		
179	UNI-KARLSRUHE	ekp-lcg-ce.physik.uni-karlsruhe.de	ok	ok	ok	LOG-2 7 0	72	57	7	0	0.38	0.00	93	75	OK		
180	UPV-GR-CAP	ramses.dsic.upv.es	ok	ok	ok	LOG-2 6 0	22	21	1	0	0.00	0.01	26	25	OK		
181	USC-LCG2	lcg-ce.usc.cesga.es	ok	ok	ok	LOG-2 7 0	126	1	135	0	0.05	0.00	126	123	OK		
182	USCMS-FNAL-WC1	cmslsc.fnal.gov	ok	warn	ok	GLITE-3 0 0	967	3	1930	3316	0	0	986	642	CT		
183	VU-MIE-LCG2	grid2.mf.vu.lt	ok	ok	note	GLITE-3 0 0	16	8	0	0	0.14	0	32	28	OK		
184	WARSAW-EGEE	ce.polgrid.pl	ok	ok	ok	LOG-2 7 0	202	60	88	0	3.20	0	202	140	OK		
185	WCSS	ce.egee.wcss.wroc.pl	ok	ok	ok	LOG-2 7 0	12	0	11	44	0.03	0.00	12	11	OK		
186	WEIZMANN-LCG2	wpp-ce.weizmann.ac.il	ok	ok	ok	LOG-2 7 0	47	1	26	128	0.12	0.02	49	48	OK		
187	wuppertalprod	grid-ce.physik.uni-wuppertal.de	ok	ok	ok	GLITE-3 0 0	55	7	100	84	0.84	0.17	410	126	SD		
							sites	countries	totalCPU	freeCPU	runJob	waitJob	seAvail TB	seUsed TB	maxCPU	avgCPU	
							Total	187	43	22063	6433	10444	162535	10167.27	4619.17	60680	31328

Services

- RB
- Gridlce
- LFC
- DLI
- Myproxy
- FTS
- ...

GStat: 09:44:39 06/19/06 GMT - Mozilla Firefox

http://goc.grid.sinica.edu.tw/gstat/service.html

GStat: 09:44:39 06/19/06 GMT

[home](#) [alert](#) [table](#) [service](#) [regional](#) [service](#) [metrics](#) [links](#) [prod](#) [pps](#) [test](#) [baltic](#) [eela](#) [euchina](#) [eumed](#) [seegrid](#)

VOs: [ALL](#) [CMS](#) [DTEAM](#) [LCG](#) [aegis](#) [alice](#) [ams](#) [apdg](#) [apesci](#) [argo](#) [asci](#) [astron](#) [astrop](#) [atlas](#) [atlas](#) [auger](#) [auvergrid](#) [babar](#) [baikal](#) [balticgrid](#) [beapps](#) [becms](#) [belle](#) [bes](#) [betest](#) [bfg](#) [bio](#) [biomath](#) [biomed](#) [biowur](#) [calice](#) [cdf](#) [cedar](#) [cesga](#) [cms](#) [cns](#) [compass](#) [compchem](#) [cosmo](#) [dapnia](#) [dcms](#) [dech](#) [desy](#) [dgtest](#) [diligent](#) [dteam](#) [dzero](#) [edteam](#) [earth](#) [eela](#) [egeode](#) [egrid](#) [elis](#) [embrace](#) [emutd](#) [enea](#) [esr](#) [estonia](#) [euchina](#) [eumed](#) [fusion](#) [fusion](#) [rdig](#) [games](#) [geant4](#) [gear](#) [gene](#) [ghep](#) [gn](#) [gitest](#) [gridi](#) [glastudents](#) [herab](#) [hermes](#) [hgdemo](#) [hone](#) [hungrid](#) [icecube](#) [ifc](#) [ilc](#) [ildg](#) [inaf](#) [infngrid](#) [ingv](#) [intec](#) [jku](#) [lhcb](#) [lhcbprd](#) [libi](#) [liger](#) [lpt](#) [ltwo](#) [magic](#) [marine](#) [mice](#) [minos](#) [na48](#) [nadc](#) [ncf](#) [ngs](#) [nw](#) [ru](#) [ops](#) [oxg](#) [pamela](#) [pdc](#) [pheno](#) [phicos](#) [photon](#) [picard](#) [planck](#) [prtms](#) [pvier](#) [rdteam](#) [rgstest](#) [ridgrid](#) [riker](#) [sbc](#) [scalig](#) [see](#) [seegrid](#) [sixt](#) [skgrid](#) [sno](#) [solovo](#) [ssf](#) [swetest](#) [switch](#) [t2k](#) [test](#) [theophys](#) [trgida](#) [trgridb](#) [trgridc](#) [trgridd](#) [trgride](#) [trgridf](#) [trgridg](#) [tutor](#) [twgrid](#) [unosat](#) [virgo](#) [vldb](#) [vledut](#) [vlefi](#) [vlemed](#) [vlibu](#) [vo](#) [dapnia](#) [cea](#) [fr](#) [vo.grif](#) [fr](#) [vo.lal](#) [in2p3](#) [fr](#) [voce](#) [webcom](#) [zeus](#)

ALL		
Site	Service Info	VO Access
ResourceBroker		
AEGIS01-PHY-SCL	rb.phy.bg.ac.yu.7772	['aegis', 'atlas', 'cms', 'esr', 'see', 'seegrid', 'dteam', 'ops']
BEgrid-UGent	gridui.atlantis.ugent.be.7772	['dteam', 'betest', 'intec', 'elis', 'becms', 'biomath', 'lpt', 'beapps', 'ssf']
BEgrid-ULB-VUB	laranja.uhe.ac.be.7772	['betest', 'becms', 'beapps', 'cms', 'dteam']
BEIJING-LCG2	lcg005.ihep.ac.cn.7772	['atlas', 'bes', 'cms', 'dteam']
BIFI	rb-egee.bfi.unizar.es.7772	['fusion', 'atlas', 'lhcb', 'dteam', 'ops', 'swetest']
BUDAPEST	grid151.kfki.hu.7772	['atlas', 'alice', 'cms', 'dteam', 'geant4', 'hungrid', 'lhcb', 'ops', 'voce']
CERN-PROD	gdrb01.cern.ch.7772	['unosat', 'atlas', 'alice', 'lhcb', 'cms', 'dteam', 'sixt', 'na48', 'gear', 'geant4', 'compass']
CERN-PROD	gdrb02.cern.ch.7772	['ops', 'dteam']
CERN-PROD	gdrb03.cern.ch.7772	['atlas', 'alice', 'lhcb', 'cms', 'dteam', 'sixt', 'na48', 'gear', 'geant4', 'compass']
CERN-PROD	gdrb04.cern.ch.7772	['lhcb', 'dteam']
CERN-PROD	gdrb06.cern.ch.7772	['cms', 'dteam']
CERN-PROD	gdrb07.cern.ch.7772	['lhcb', 'dteam']
CERN-PROD	gdrb08.cern.ch.7772	['cms', 'dteam']
CERN-PROD	gdrb09.cern.ch.7772	['atlas', 'dteam']
CERN-PROD	gdrb10.cern.ch.7772	['atlas', 'dteam']
CERN-PROD	gdrb11.cern.ch.7772	['alice', 'ops', 'dteam']
CERN-PROD	rb104.cern.ch.7772	['alice', 'dteam']
CERN-PROD	rb105.cern.ch.7772	['atlas', 'dteam']
CERN-PROD	rb106.cern.ch.7772	['cms', 'dteam']
CERN-PROD	rb107.cern.ch.7772	['dteam', 'lhcb']
CERN-PROD	rb108.cern.ch.7772	['unosat', 'ops', 'dteam', 'sixt', 'na48', 'gear', 'geant4']

Terminado 21.922s Adblock

SFT

- **js** [Job submission](#)
- **bi** [BrokerInfo](#)
- **ver** [Software Version \(WN\)](#)
- **wn** [WN host name](#)
- **cs** [SH test](#)
- **ca** [CA certs version](#)
- **crl** [CRL timestamp test](#)
- **votag** [VO Tag management](#)
- **swdir** [VO software directory](#)
- **rgma** [R-GMA](#)
- **rgmasc** [R-GMA Secure Connector](#)
- **apel** [Apel test](#)
- **gfal** [GFAL Information System](#)
- **rm** [Replica Management](#)
- **cr** [lcg-cr to local SE](#)
- **cp** [lcg-cp from local SE](#)
- **rep** [lcg-rep to "central" SE](#)
- **del** [lcg-del](#)

GridICE

- **Based upon NAGIOS**
- **Low level collection***: **LEMON** (previously FMON) to collect the host related metrics.
- **Publishing service***: on a collector node visible from the internet (default is LCG-SE) there is a service that put the info collected by the LEMON server to a **EXtended GRIS** (run on port 2136)
- **Discovery and high level collection**: on the top there is a service that **discovers** new resources from BDII's. The info is stored on a **RDBMS** for **historical and analysis purposes**

*needed only to publish extended info

INFN - GridICE - Grid Monitoring Service - Mozilla Firefox

http://www2.egee.cesga.es/gridice/site/site.php

SGE News MPI CESGA GRAI EDMS: COD Operatio... the LCG Directory EGEE-TORGA Spurl! Spurl bar MARC: Mailing list AR...



is monitoring 

Geo view Site view VO view Help About

GridICE >> Site::ALL

General **Gris** Host Job Charts Network


Site	GK#	Q#	RunJob	WaitJob	Computing Resources				Storage Resources					
					SlotLoad	MH#	Power	WN#	CPU#	CPUload	Available	Total	%	
BIFI	1	6	41	10	64%	32	179K	28	28	73%	70.9 GB	103.5 GB	31%	
CESGA-EGEE	1	9	0	0	10%	19	54K	15	26	1%	24.5 GB	947.5 GB	97%	
CIEMAT-LCG2	1	10	220	58	79%	24	536K	21	84	52%	2.5 TB	5 TB	54%	
CNB-LCG2	1	7	15	196	94%	11	126K	8	32	31%	869.2 GB	938.1 GB	7%	
IFCA-LCG2	1	4	28	37	-	-	-	-	-	-	242.8 GB	260 GB	7%	
IFIC-LCG2	1	10	19	0	15%	9	-	-	-	-	1.8 PB	2.7 PB	33%	
LIP-LCG2	1	7	10	1	36%	16	151K	12	36	21%	6.4 TB	6.7 TB	4%	
UAM-LCG2	1	3	116	72	99%	-	-	-	-	-	21.6 TB	25.6 TB	15%	
UB-LCG2	1	3	89	22	96%	2	-	-	-	-	44.6 GB	46 GB	3%	
UPV-GRyCAP	1	7	0	0	0%	16	34K	10	20	0%	7.9 GB	24.4 GB	68%	
USC-LCG2	1	5	135	7	99%	2	-	-	-	-	60.4 GB	64 GB	6%	
ifae	1	6	9	8	43%	2	-	-	-	-	-	-	-	
pic	2	9	145	71	67%	15	-	-	-	-	-	-	-	
TOTAL	# 13	14	86	827	482	60%	148	1M	94	226	30%	1.9 PB	2.8 PB	29%


Generated: Mon, 19 Jun 2006 13:44:06 +0200 [GridICE Homepage](#)

Terminado 2.234s S Adblock

INFN - GridICE - Grid Monitoring Service - Mozilla Firefox

http://www2.egee.cesga.es/gridice/host/host_summary.php?siteName=CESGA-EGEE



It monitoring 

Geo view Site view VO view Help About

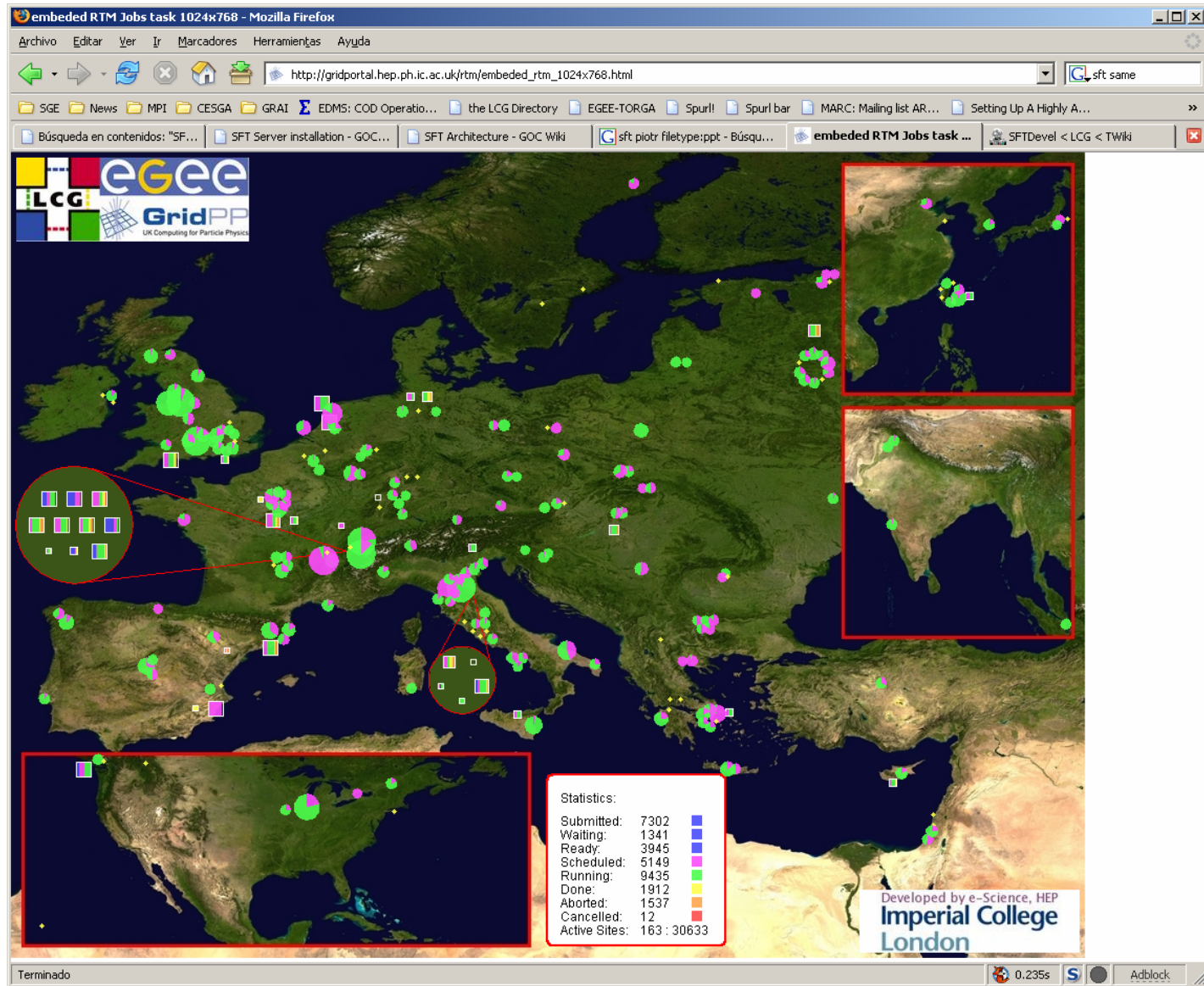
GridICE >> Site::ALL >> Site::CESGA-EGEE

CE	SE	Gris	Host	Job	Charts					
Hostname	Site	Role	Procs	Load15Min	CPU Usage	RAM Free	RAM Usage	Virtual Free	Virtual Usage	Last Check
ce2.egee.cesga.es	CESGA-EGEE	CE	3.37	56%	24 MB	95%	340 MB	67%	0h6m3s	
mon.egee.cesga.es	CESGA-EGEE	GC-RG	0.43	9%	26 MB	95%	424 MB	60%	0h6m3s	
test01.egee.cesga.es	CESGA-EGEE	RB	0.02	3%	23 MB	95%	1 GB	85%	0h6m3s	
se2.egee.cesga.es	CESGA-EGEE	SE	0	1%	29 MB	97%	0.6 GB	63%	0h6m3s	
cisn2.cesga.es	CESGA-EGEE	WN	0.49	3%	307 MB	88%	1.3 GB	13%	0h6m3s	
cisn3.cesga.es	CESGA-EGEE	WN	0.31	1%	182 MB	63%	1.2 GB	21%	0h6m3s	
cisn4.cesga.es	CESGA-EGEE	WN	0.54	2%	262 MB	47%	1.2 GB	16%	0h6m3s	
cisn5.cesga.es	CESGA-EGEE	WN	0.13	0%	326 MB	85%	1.3 GB	12%	0h6m3s	
cisn6.cesga.es	CESGA-EGEE	WN	0.61	2%	232 MB	53%	1.2 GB	18%	0h6m3s	
cisn7.cesga.es	CESGA-EGEE	WN	0.41	0%	47 MB	91%	47 MB	91%	0h6m3s	
grid01.grid.cesga.es	CESGA-EGEE	WN	0	0%	161 MB	68%	1.2 GB	22%	0h6m3s	
lcfng.grid.cesga.es	CESGA-EGEE	WN	0	0%	228 MB	54%	1.2 GB	18%	0h6m3s	
se.grid.cesga.es	CESGA-EGEE	WN	0	0%	19 MB	96%	1 GB	81%	0h6m3s	
torga-grd01.gcom.di.uminho.pt	CESGA-EGEE	WN	0	0%	360 MB	23%	1.3 GB	8%	89h27m53s	
torga-grd23.gcom.di.uminho.pt	CESGA-EGEE	WN	0	0%	55 MB	89%	1 GB	29%	121h26m55s	
torga-grd25.gcom.di.uminho.pt	CESGA-EGEE	WN	0	0%	33 MB	93%	1 GB	30%	121h26m55s	
torga-grd27.gcom.di.uminho.pt	CESGA-EGEE	WN	0	0%	55 MB	89%	1 GB	29%	121h26m55s	
wn004.egee.cesga.es	CESGA-EGEE	WN	0.07	1%	80 MB	84%	0.6 GB	9%	0h6m3s	
wn007.egee.cesga.es	CESGA-EGEE	WN	0	0%	62 MB	88%	1.1 GB	29%	0h6m3s	

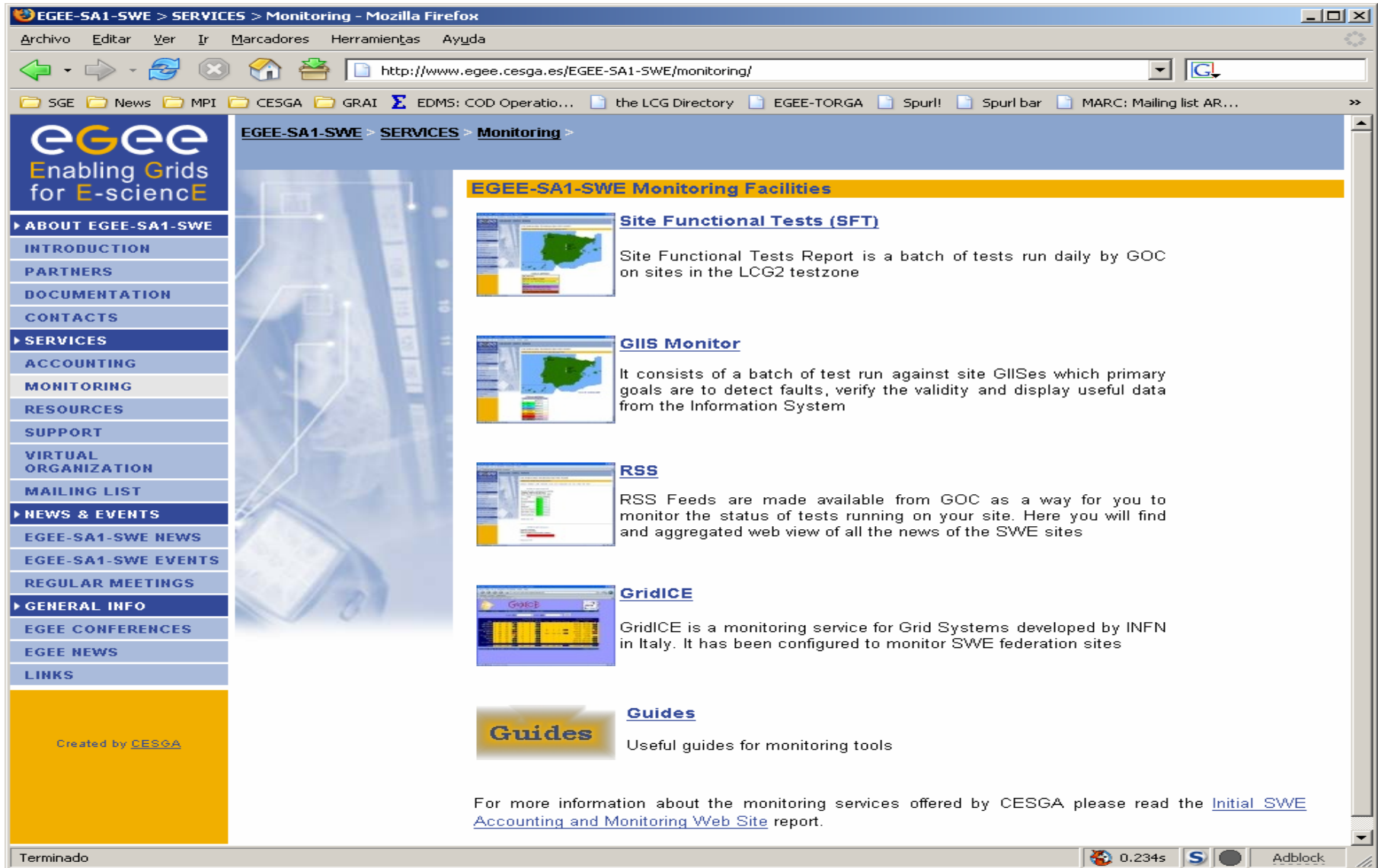
Generated: Mon, 19 Jun 2006 13:45:39 +0200 [GridICE Homepage](#)

Terminado 2.797s S Adblock

- **Java tool that tracks the jobs currently running on EGEE.**
- **Daily Summary Reports are produced**
- <http://gridportal.hep.ph.ic.ac.uk/rtm/>



- **Monitoring maps:**
 - Let you see geographically the status of every site in the South-West Federation taking into account two different tests: LCG2 Testzone Report and LCG2 GIS Monitor (GSTAT)
- **RSS:**
 - With this tool a detailed status of the tests running on every site is provided.
- **Email Monitoring alerts**
- **GridICE Server**



Archivo Editor Ver Ir Marcadores Herramientas Ayuda

http://www.egee.cesga.es/EGEE-SA1-SWE/monitoring/

SGE News MPI CESGA GRAI EDMS: COD Operatio... the LCG Directory EGEE-TORGA Spurl! Spurl bar MARC: Mailing list AR...

EGEE-SA1-SWE > **SERVICES** > **Monitoring** >

EGEE-SA1-SWE Monitoring Facilities

Site Functional Tests (SFT)
 Site Functional Tests Report is a batch of tests run daily by GOC on sites in the LCG2 testzone

GIIS Monitor
 It consists of a batch of test run against site GIISes which primary goals are to detect faults, verify the validity and display useful data from the Information System

RSS
 RSS Feeds are made available from GOC as a way for you to monitor the status of tests running on your site. Here you will find and aggregated web view of all the news of the SWE sites

GridICE
 GridICE is a monitoring service for Grid Systems developed by INFN in Italy. It has been configured to monitor SWE federation sites

Guides
 Useful guides for monitoring tools

Created by [CESGA](#)

Terminado 0.234s S Adblock

- **SAME (Service Availability Monitoring Environment)**
 - Based on SFT
 - Also includes Monitoring of Services
 - <https://uimon.cern.ch/twiki/bin/view/LCG/SFTDevel>
- **GridFTP Monitor**
 - Analysis of GridFTP Log for Service Challenge 3
 - <http://gridview.cern.ch/>
- **RGMA Job Monitoring Web Interface**
 - Web based GUI that does R-GMA queries on the JobMonitor and JobStatusRaw tables.
 - <https://lcg-job-monitor.cern.ch:8443/job-monitor/job-monitor.cgi>
- **Site Certificate Monitoring**
 - <http://goc.grid-support.ac.uk/gridsite/monitoring/certificates/CERTView.php>

- **Ganglia**
- **Nagios**

Ganglia:: CESGA-GRID Grid Report - Mozilla Firefox

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http://www2.egee.cesga.es/ganglia/?m=&r=hour&s=descending&hc=4

SGE News MPI CESGA GRAI EDMS: COD Operatio... the LCG Directory EGEE-TORGA Spurl! Spurl bar MARC: Mailing list AR...

Ganglia **CESGA-GRID Grid Report for Mon, 19 Jun 2006 15:05:54 +0200** [Get Fresh Data](#)

Last Sorted

CESGA-GRID Grid >

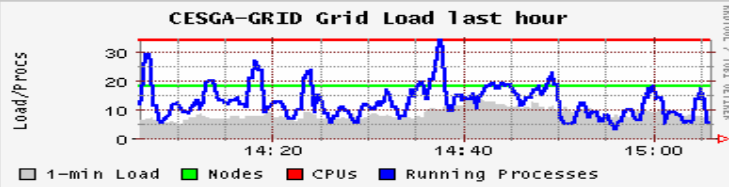
CESGA-GRID Grid (6 sources) (tree view)

CPU's Total: **34**
 Hosts up: **18**
 Hosts down: **5**

Avg Load (15, 5, 1m):
 27%, 26%, 23%

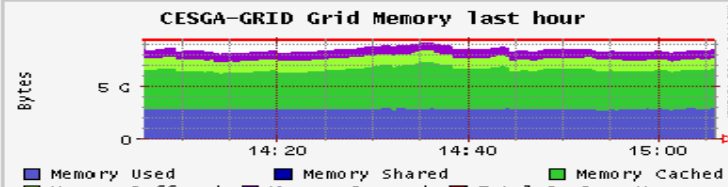
Localtime:
 2006-06-19 15:05

CESGA-GRID Grid Load last hour



Legend: 1-min Load (grey), Nodes (green), CPU's (red), Running Processes (blue)

CESGA-GRID Grid Memory last hour



Legend: Memory Used (blue), Memory Shared (dark blue), Memory Cached (green), Memory Buffered (light green), Memory Swapped (purple), Total In-Core Memory (red)

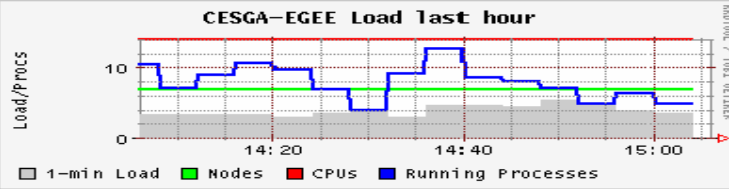
CESGA-EGEE (physical view)

CPU's Total: **14**
 Hosts up: **7**
 Hosts down: **5**

Avg Load (15, 5, 1m):
 30%, 28%, 26%

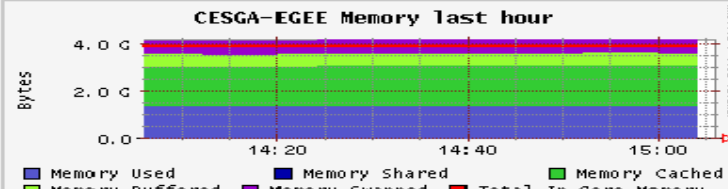
Localtime:
 2006-06-19 15:05

CESGA-EGEE Load last hour



Legend: 1-min Load (grey), Nodes (green), CPU's (red), Running Processes (blue)

CESGA-EGEE Memory last hour



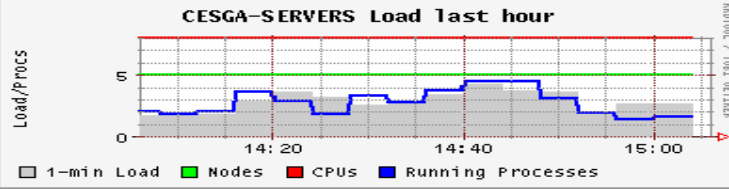
Legend: Memory Used (blue), Memory Shared (dark blue), Memory Cached (green), Memory Buffered (light green), Memory Swapped (purple), Total In-Core Memory (red)

CESGA-SERVERS (physical view)

CPU's Total: **8**
 Hosts up: **5**
 Hosts down: **0**

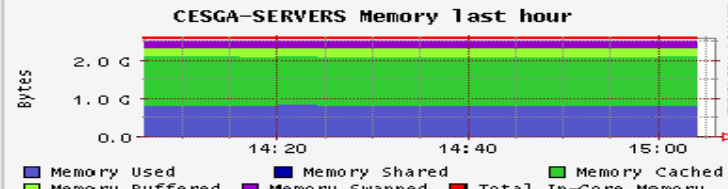
Avg Load (15, 5, 1m):
 39%, 34%, 21%

CESGA-SERVERS Load last hour



Legend: 1-min Load (grey), Nodes (green), CPU's (red), Running Processes (blue)

CESGA-SERVERS Memory last hour



Legend: Memory Used (blue), Memory Shared (dark blue), Memory Cached (green), Memory Buffered (light green), Memory Swapped (purple), Total In-Core Memory (red)

Terminado

0.829s S Adblock

Nagios - Mozilla Firefox

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http://cheaptb.cesga.es/nagios/

SGE News MPI CESGA GRAI EDMS: COD Operatio... the LCG Directory EGEE-TORGA Spurl! Spurl bar MARC: Mailing list AR...

Home

Monitoring

- Tactical Overview
- Service Detail
- Host Detail
- hostname
- Host Group
- Service Group
- Status Map
- Problems
- Comments
- Downtime

Reporting

- Trends
- Availability
- Alerts
- Notifications
- Event Log

Configuration

Current Network Status

Last Updated: Mon Jun 19 15:06:45 CEST 2006
Updated every 60 seconds
Nagios® - www.nagios.org
Logged in as *egee*

View Service Status Detail For All Host Groups
View Host Status Detail For All Host Groups
View Status Summary For All Host Groups
View Status Grid For All Host Groups

Host Status Totals

Up	Down	Unreachable	Pending
117	0	0	0
All Problems		All Types	
0		117	

Service Status Totals

Ok	Warning	Unknown	Critical	Pending
908	19	0	13	0
All Problems		All Types		
32		940		

Service Overview For All Host Groups

bw.cesga.es (bw.cesga.es)

Host	Status	Services	Actions
bw	UP	8 OK 1 WARNING	
bw1	UP	8 OK	
bw10	UP	8 OK	
bw11	UP	8 OK	
bw12	UP	8 OK	
bw13	UP	8 OK	
bw14	UP	8 OK	
bw15	UP	8 OK	
bw16	UP	8 OK	
bw2	UP	8 OK	

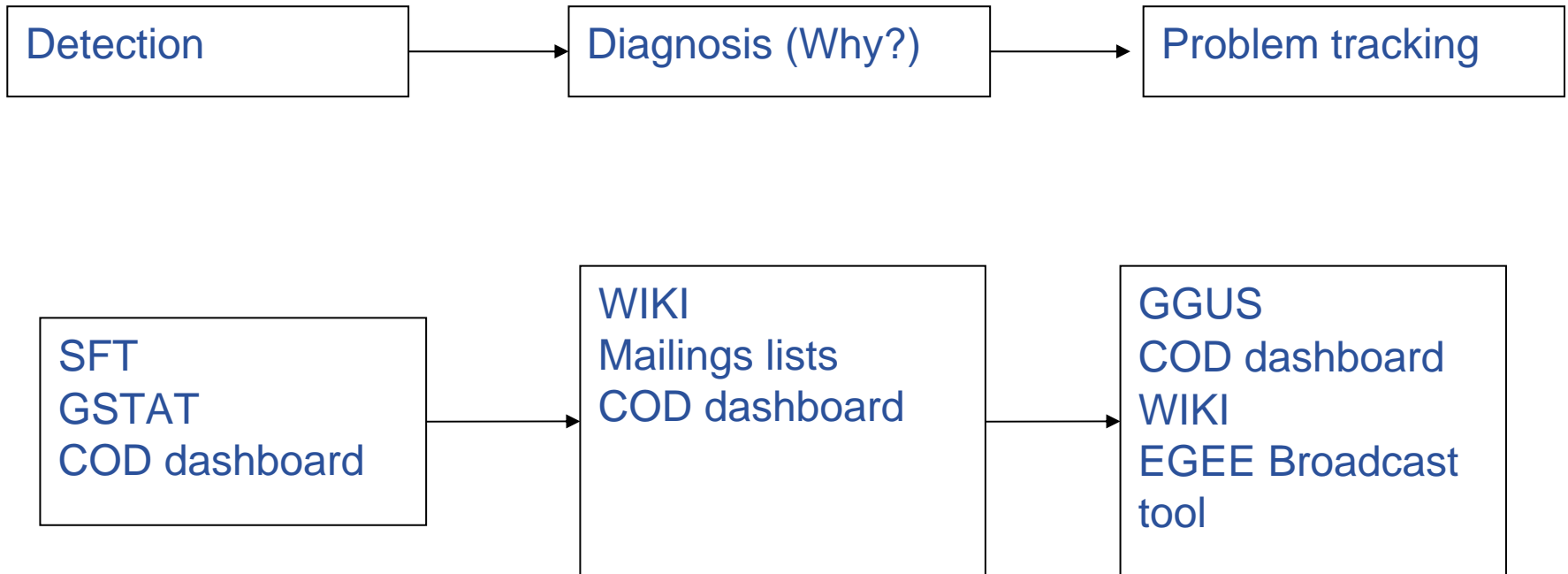
cheaptb.cesga.es (cheaptb.cesga.es)

Host	Status	Services	Actions
cheaptbg	UP	4 OK 1 WARNING	
cheaptbg1	UP	6 OK 1 CRITICAL	
cheaptbg2	UP	7 OK	
cheaptbg3	UP	6 OK 1 CRITICAL	
cheaptbg4	UP	6 OK	

egee.cesga.es (egee.cesga.es)

Host	Status	Services	Action:
test01.EGEE	UP	4 OK 1 CRITICAL	
www.EGEE	UP	1 OK 2 CRITICAL	
www2.EGEE	UP	3 OK 1 CRITICAL	

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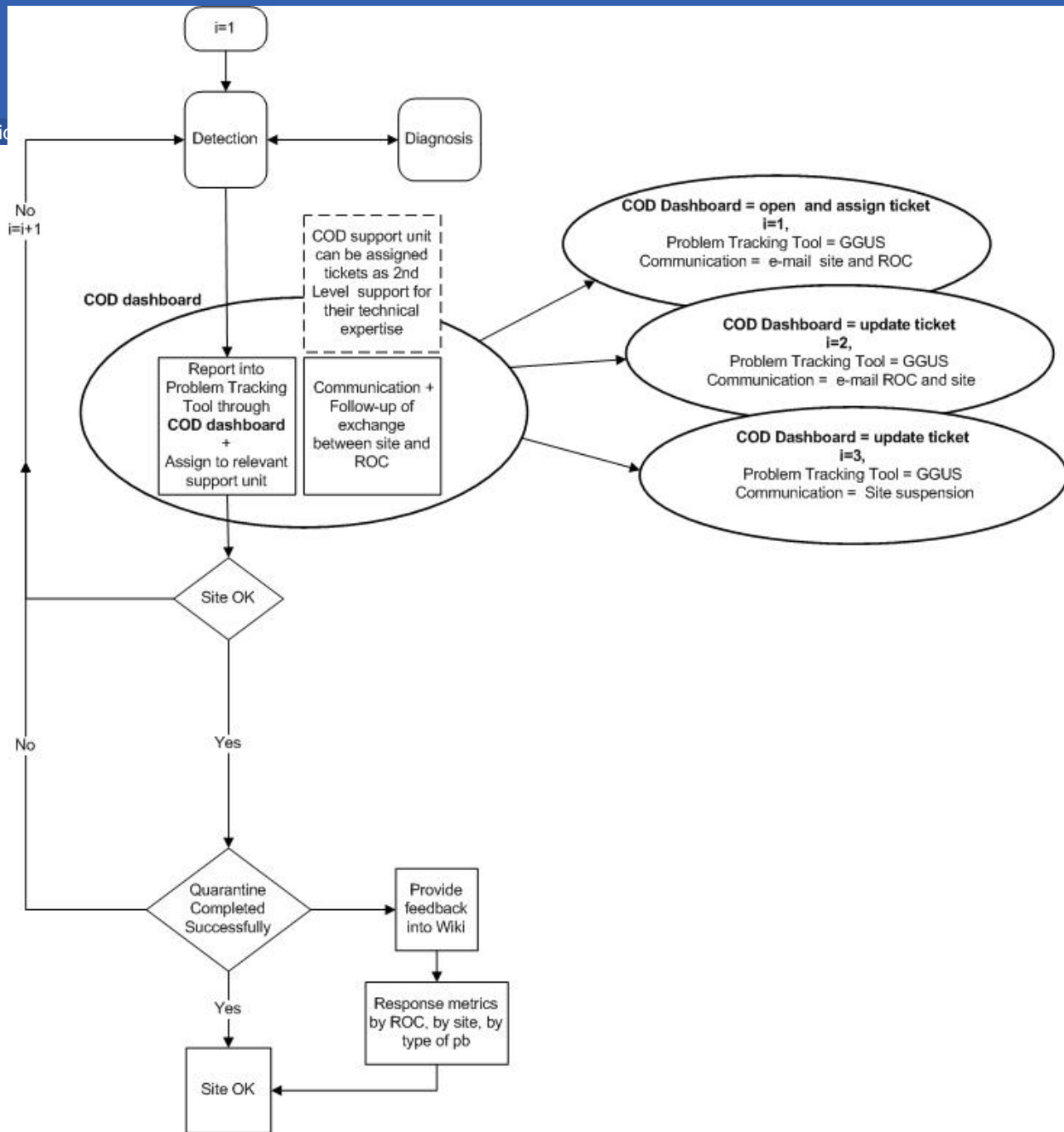


- What to do if a spotted problem is unattended?
- An **ESCALATION PROCEDURE** should be available
- It is the most critical part of operations
- **CIC on Duty (COD)**
 - Weekly rotation between ROCs (was CIC)

Tickets

Suspended sites

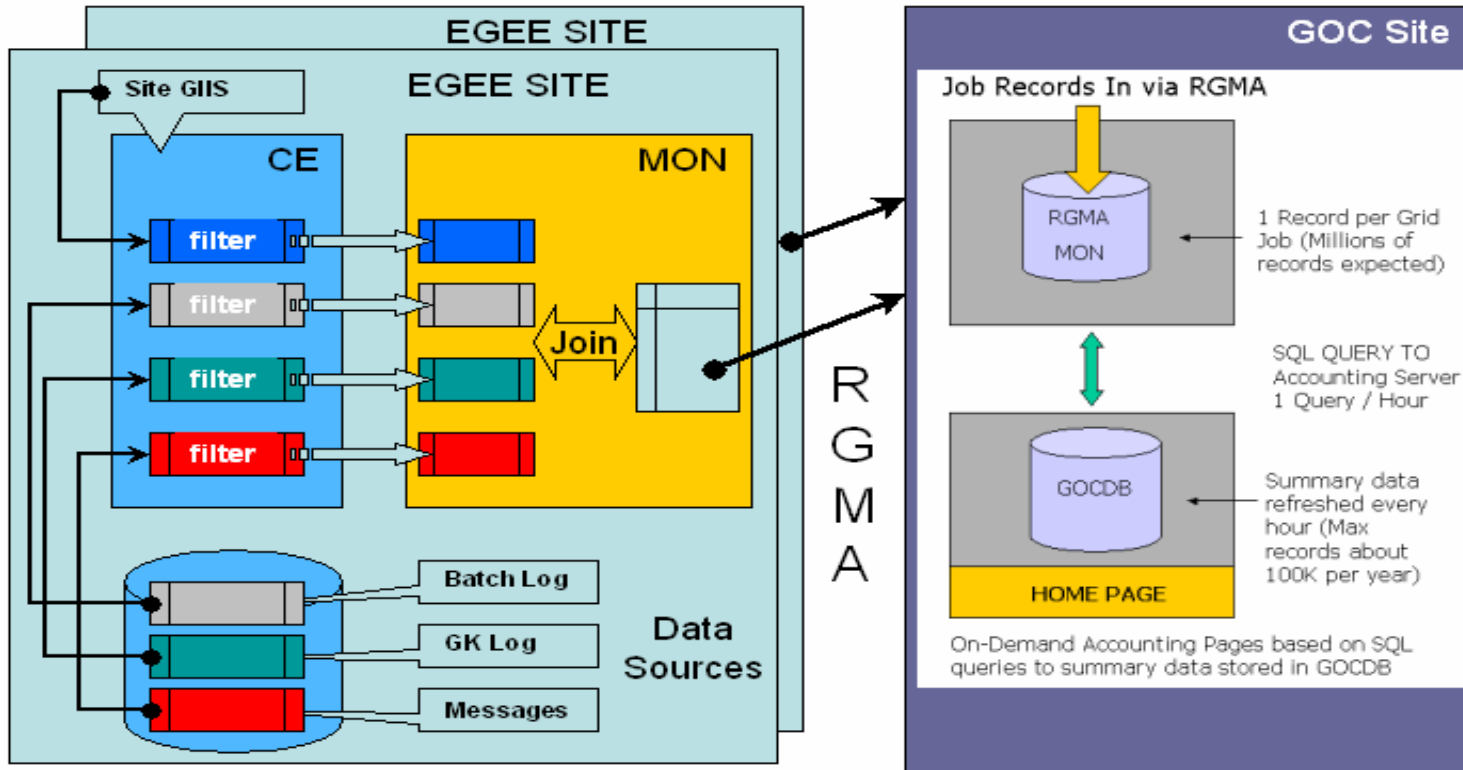
Quarantine



ACCOUNTING

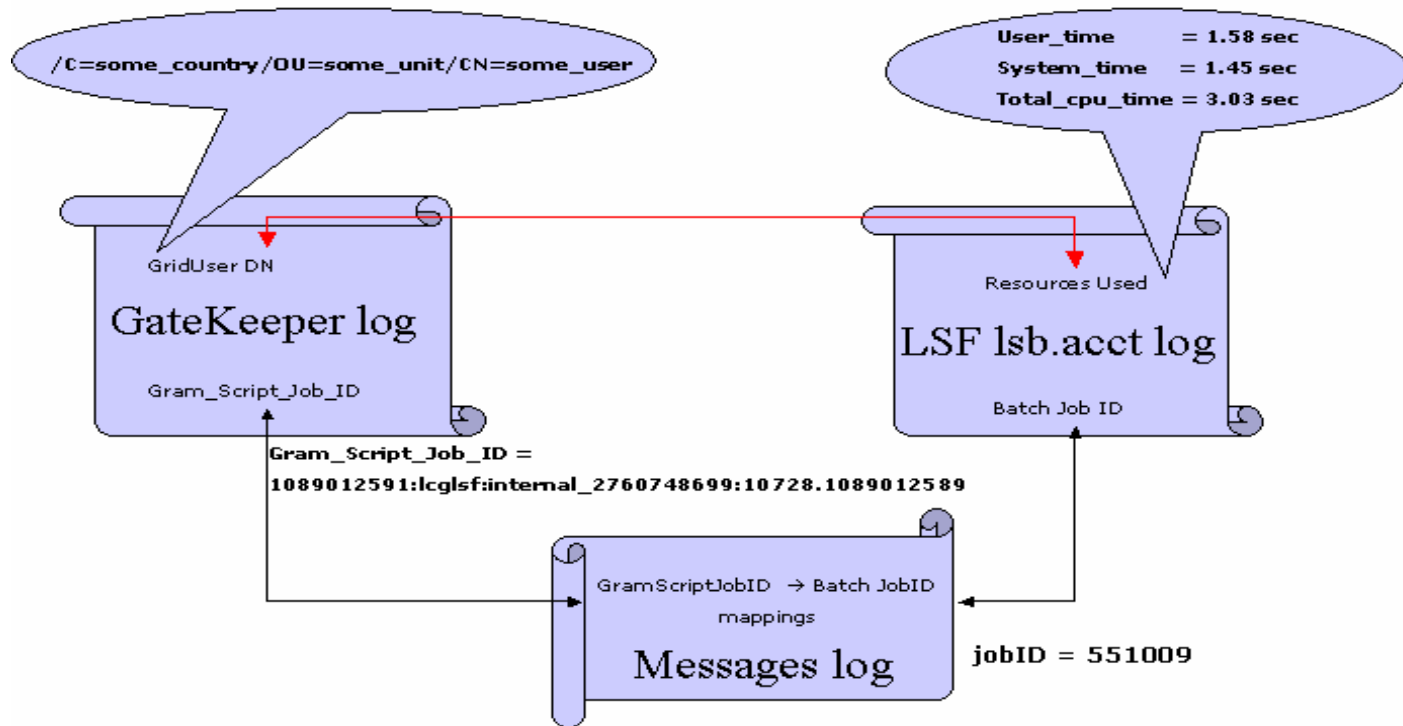
- **Job Accounting AFTER the event (APEL Domain)**
 - Determination of value after job execution
 - Job usage record as a complete description of resource consumption
 - Suitable for post paid services
 - Metering
- **Real Time Accounting (DGAS, SGAS Domain)**
 - Incremental determination of resource value while job being executed
 - Incremental decrement of account balance
 - Can enforce user quotas
 - Suitable for pre-paid services

- Build Job Accounting Records at site
- Send Job Records to a central repository (R-GMA)
- Data Aggregation



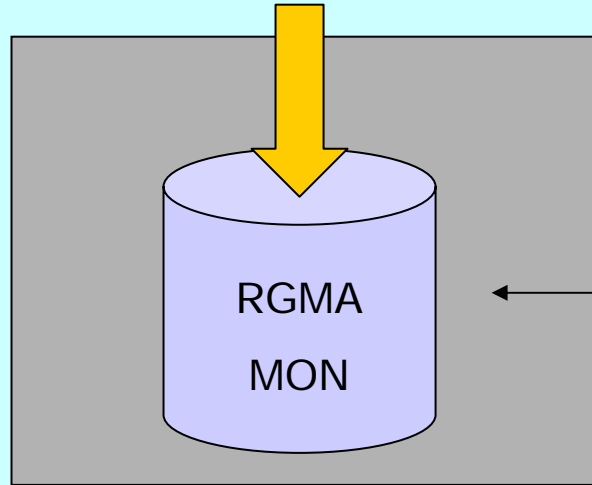
- Build Job Records at Site
- APEL mapping grid users to the resource usage on local farms

How Grid Users are Mapped to Resource Usage on Local Farm

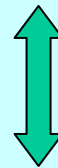


Consolidation of Data

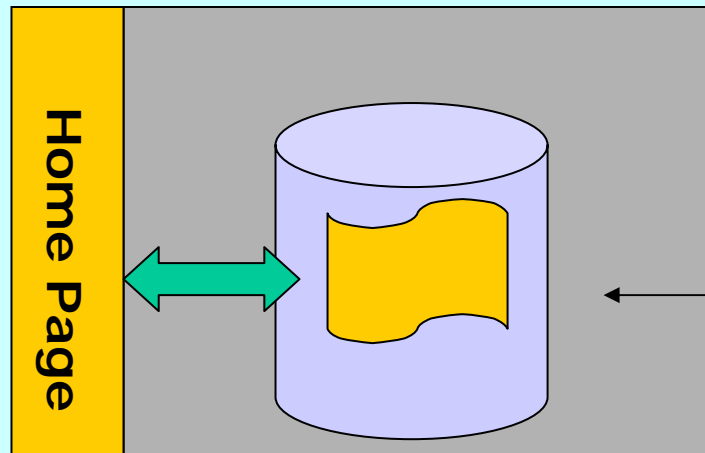
Job Records In via RGMA



1 Record per Grid Job
(Millions of records expected)



SQL QUERY TO Accounting Server
1 Query / Hour



Summary data refreshed every hour
(Max records about 100K per year)

User queries

Graphs



On-Demand Accounting Pages based on SQL queries to summary data

LcgRecords table:

- **Fixed schema**

Data are stored centrally:

- **Production:**
 - Flexible Archiver @ RAL
- **Pre-Production**
 - Flexible Archiver @ CESGA

Grid Operations Centre - Mozilla Firefox

http://goc.grid-support.ac.uk/gridsite/accounting/

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GRID OPERATIONS CENTRE News Monitoring Accounting Operations GOC Portal

Accounting

- > Accounting Home
- Accounting Plots**
 - > EGEE View (powered by CESGA)
 - > Custom Query
 - > LHC View
 - > Feedback
 - > Privacy Statement
- Developers**
 - > Requests
 - > LSF Deployment
 - > SGE Deployment
 - > Condor Deployment
 - > APEL-DGAS Integration
 - > Normalisation
 - > Sending Data to us
- General**
 - > Flexible Archiver
 - > Data Privacy Issues
 - > RGMA Plans
 - > Contact the GOC Team

GOC Accounting Services

Latest News

- **April-24-2006:**
Migration of 2004/2005 accounting data (approx 5.5 million job records) off production archiver. Summaries and reporting are unaffected by this and continue to be based on the full dataset.
- **April-11-2006:**
New versions of the PBS and LSF plugin components have been released.

NEW! [Accounting RPMs](#) [Release-Notes](#) [Installation Guide](#) [Schema](#) [FAQ](#)

Database Statistics

Total Number of Records in RGMA database

Number of Job Records

■ Job Record Count = 4369176 entries
Last Build: Jun 19 11:21:20 2006

Number of Job Records

■ Record Count = 8032765 entries
Last Build: Jun 19 11:21:20 2006

Total number of distinct sites reporting to GOC

Number of CEs

Number of CEs

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Grid Operations Centre - Mozilla Firefox

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http://www3.egge.cesga.es/gridsite/accounting/CESGA/tree_egge.php

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GRID OPERATIONS CENTRE News Monitoring Accounting Operations GOC Portal

Accounting

- > Accounting Home
- > Normalisation
- > Contact the CESGA accounting team

EGEE Hierarchical Tree

- Production
- PPS
- VO_Metrics

Developed by CESGA

EGEE View -> Production

Data to graph: Norm. Sum CPU Normalised CPU time to a reference value of 1000 Specht2000

Period: Start year: 2005 Start month: 7 End year: 2006 End month: 6

Groupings: Show data for: REGION as a function of: VO

Chart: Type: ACCUM BAR Scale: LINEAR

dteam VO: Exclude dteam jobs information

Refresh

EGEE Normalised CPU time by REGION and VO.
July 2005 - June 2006.

The following table lists the certified sites (including also currently suspended sites) that have not published accounting data to GOC during the last 3 months. This probably indicates a major problem in the accounting system of the site so **listed sites are encouraged to take the appropriate measures to correct it.**

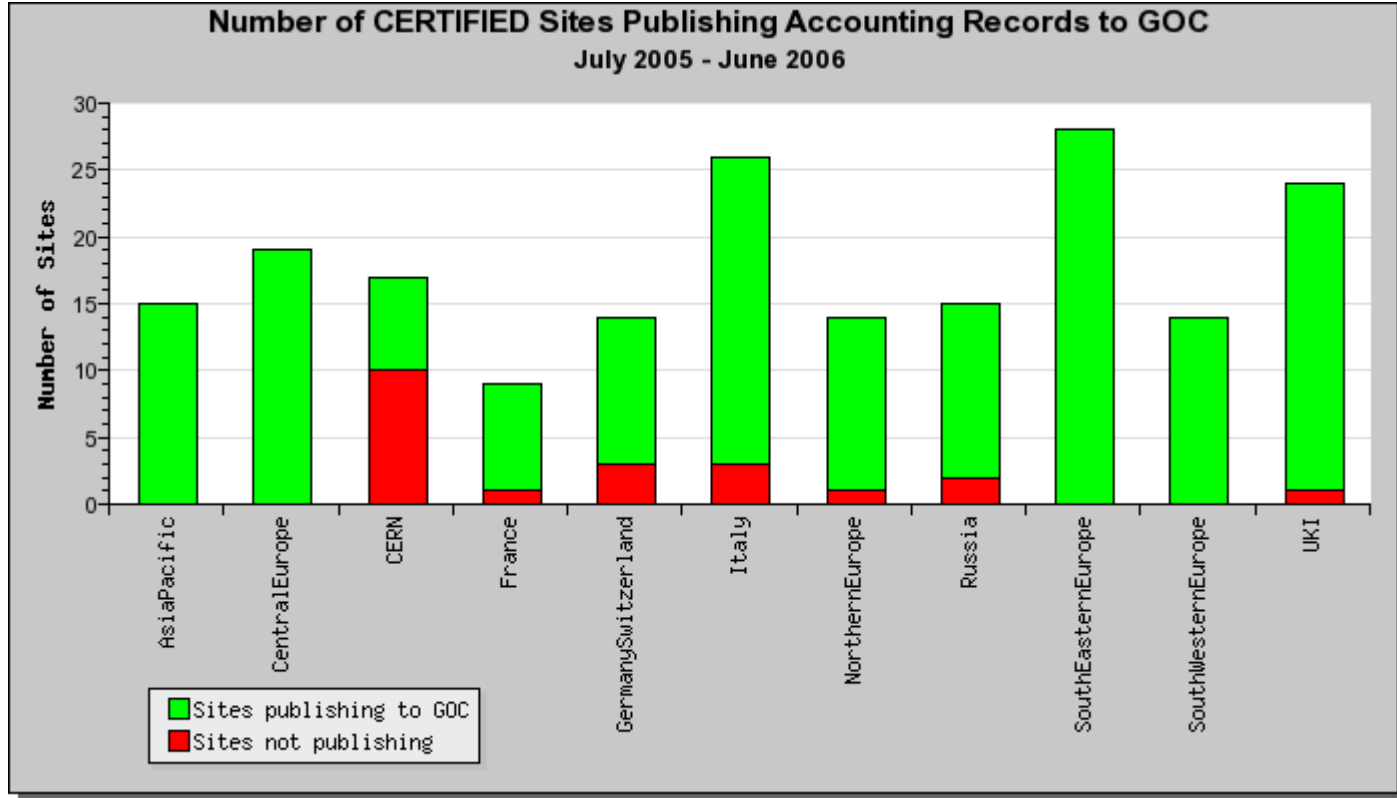
If your site is in this list, you should check the next table because you can have a problem with your published sitename.

Region	Sites
CERN	ALBERTA-LCG2, BEIJING-CNIC-LCG2-IA64, CARLETONU-LCG2, HPBR-LCG2, HPTC-LCG2, HPTC-LCG2ia64, SDU-LCG2, SFU-L UIOWA-LCG2
France	IN2P3-IRES
GermanySwitzerland	DESY-HH, GSI-LCG2, HU-BERLIN, MPPMU
Italy	INFN-BOLOGNA, INFN-BOLOGNA-CMS, INFN-LNL-2, INFN-PADOVA, INFN-TORINO, SPACI-NAPOLI-IA64
NorthernEurope	BEgrid-KULeuven
Russia	Kharkov-KIPT-LCG2, SU-Protvino-IHEP
SouthEasternEurope	LCG-IL-OU, TAU-LCG2
UKI	UCL-CCC, UKI-LT2-UCL-CENTRAL

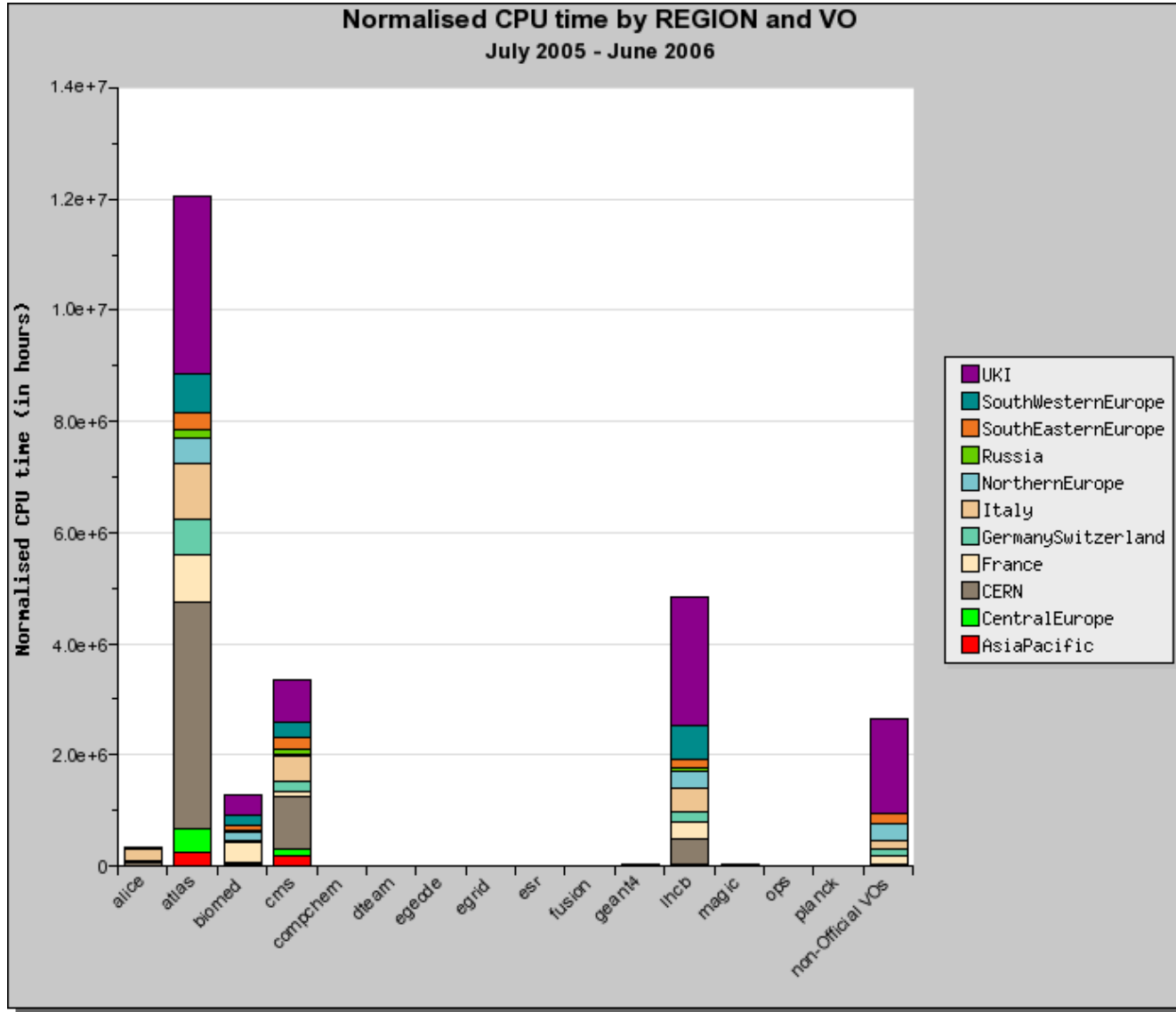
The following table lists the sites that have published accounting data to GOC but are not registered in the GOC DB. This probably indicates inconsistencies between the site information published in the accounting system and the one available in the GOC DB. **Listed sites are encouraged to take the appropriate measures to correct it.**

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CERTIFIED sites NOT publishing accounting data to GOC in the last 3 months

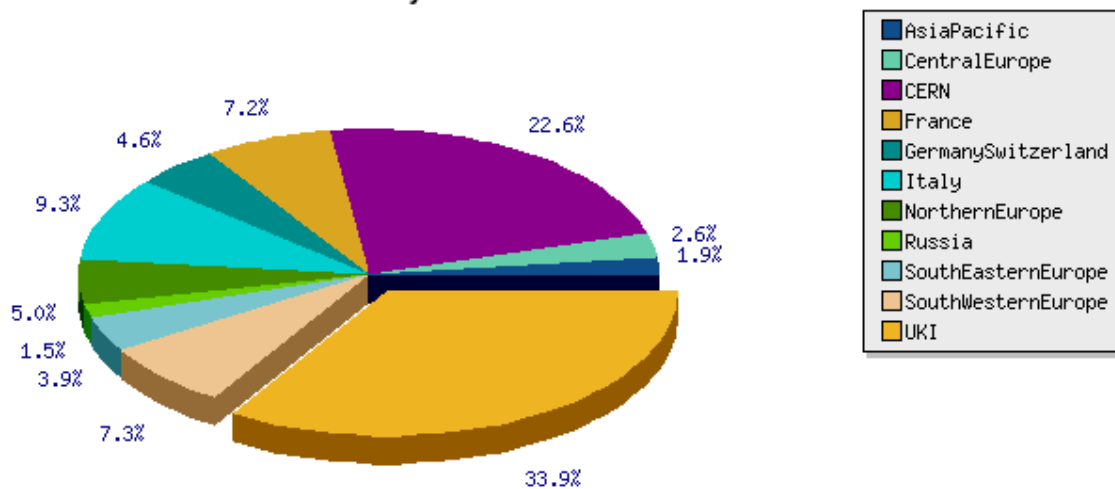


- **How to compare CPU values from different nodes?**
- **Each site publishes one GlueHostBenchmarkSI00**
- **Homogeneous sites:**
 - No problem
 - Unfortunately the least common case
- **Heterogeneous sites:**
 - Set PBS \$cputmult factor in each node
 - CPU Normalization Standalone Test to obtain SPECint

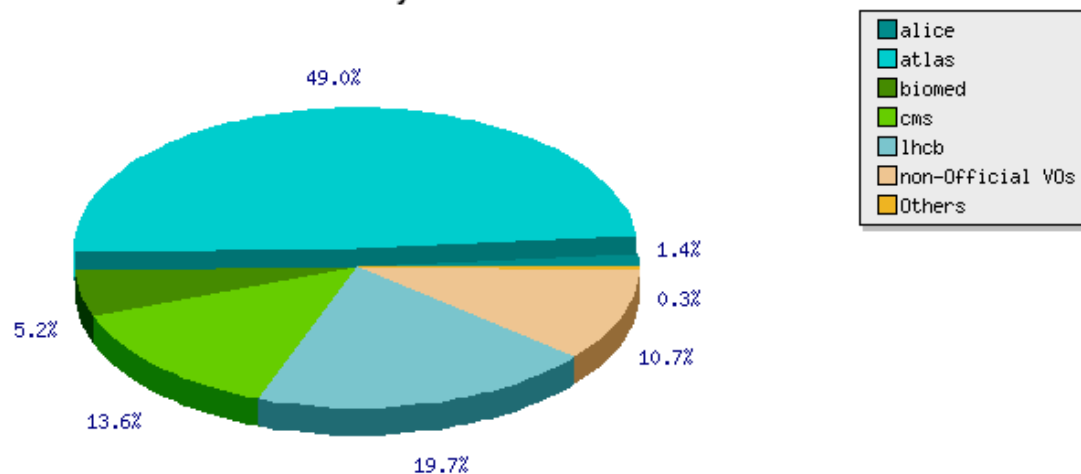


Enabling Grids for E-scienceE

**Normalised CPU time
July 2005 - June 2006**

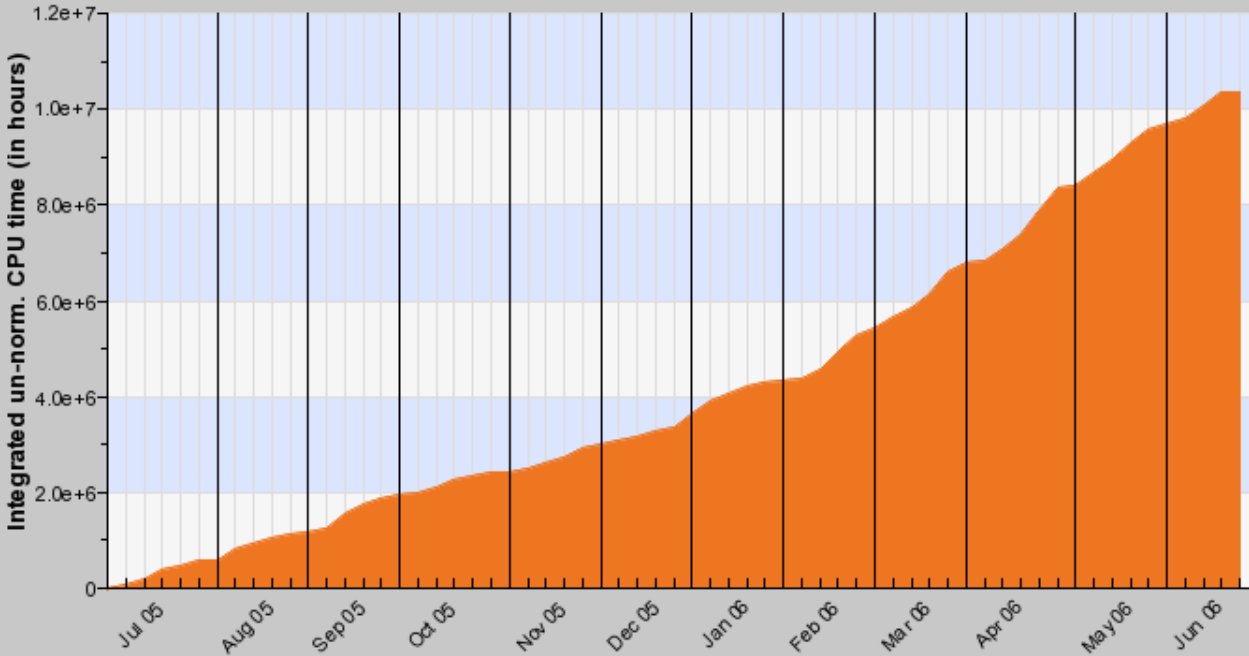


**Normalised CPU time
July 2005 - June 2006**

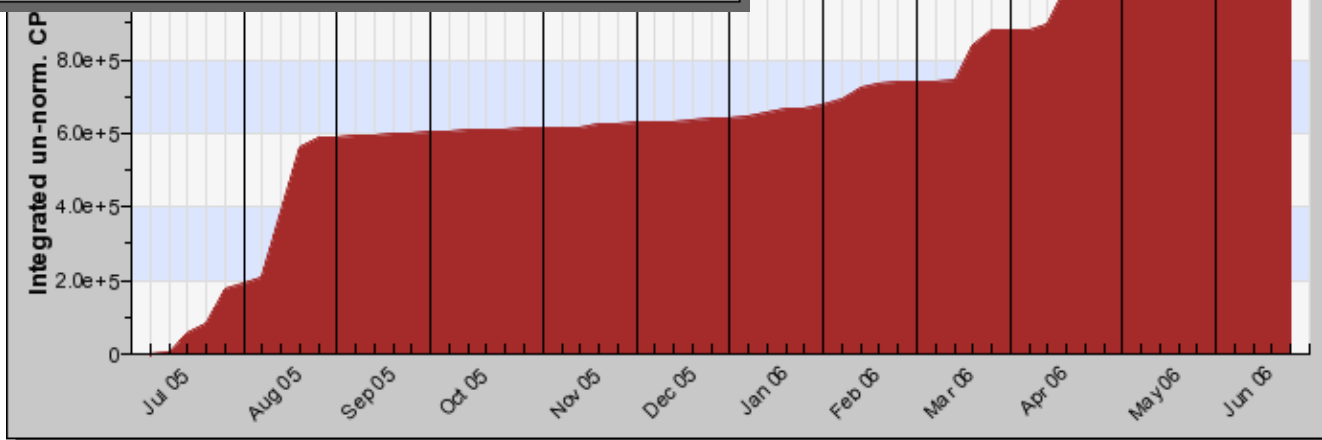


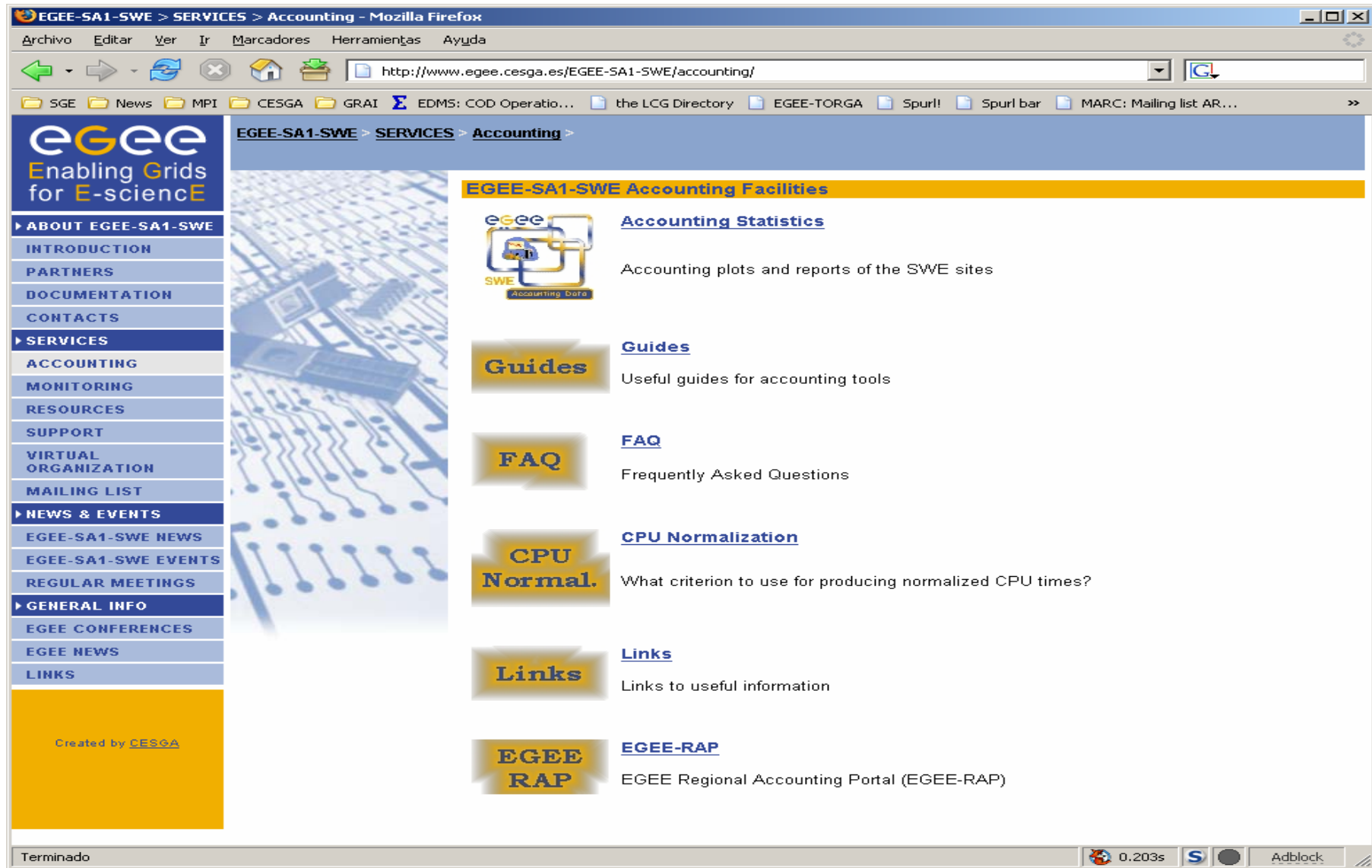
Integrated un-normalised CPU time consumed of ATLAS

July 2005 - June 2006



Time consumed of BIOMED 2006





Archivo Editor Ver Ir Marcadores Herramientas Ayuda

http://www.egee.cesga.es/EGEE-SA1-SWE/accounting/

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EGEE
Enabling Grids
for E-science

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CONTACTS


▶ SERVICES
ACCOUNTING
MONITORING
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SUPPORT
VIRTUAL ORGANIZATION
MAILING LIST

▶ NEWS & EVENTS
EGEE-SA1-SWE NEWS
EGEE-SA1-SWE EVENTS
REGULAR MEETINGS

▶ GENERAL INFO
EGEE CONFERENCES
EGEE NEWS
LINKS

Created by [CESGA](#)

EGEE-SA1-SWE Accounting Facilities

 [Accounting Statistics](#)
Accounting plots and reports of the SWE sites

Guides [Guides](#)
Useful guides for accounting tools

FAQ [FAQ](#)
Frequently Asked Questions

CPU Normal. [CPU Normalization](#)
What criterion to use for producing normalized CPU times?

Links [Links](#)
Links to useful information

EGEE RAP [EGEE-RAP](#)
EGEE Regional Accounting Portal (EGEE-RAP)

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- **DGAS**
- **EGEE RAP**
- **SGAS (Nordugrid)**

- **Pablo Rey, Francisco Bernabé (CESGA)**
- **Dave Kant (RAL)**

It is not enough to have the tools ...

... Everybody has to use them!!

THANKS FOR YOUR ATTENTION!!

QUESTIONS??

