



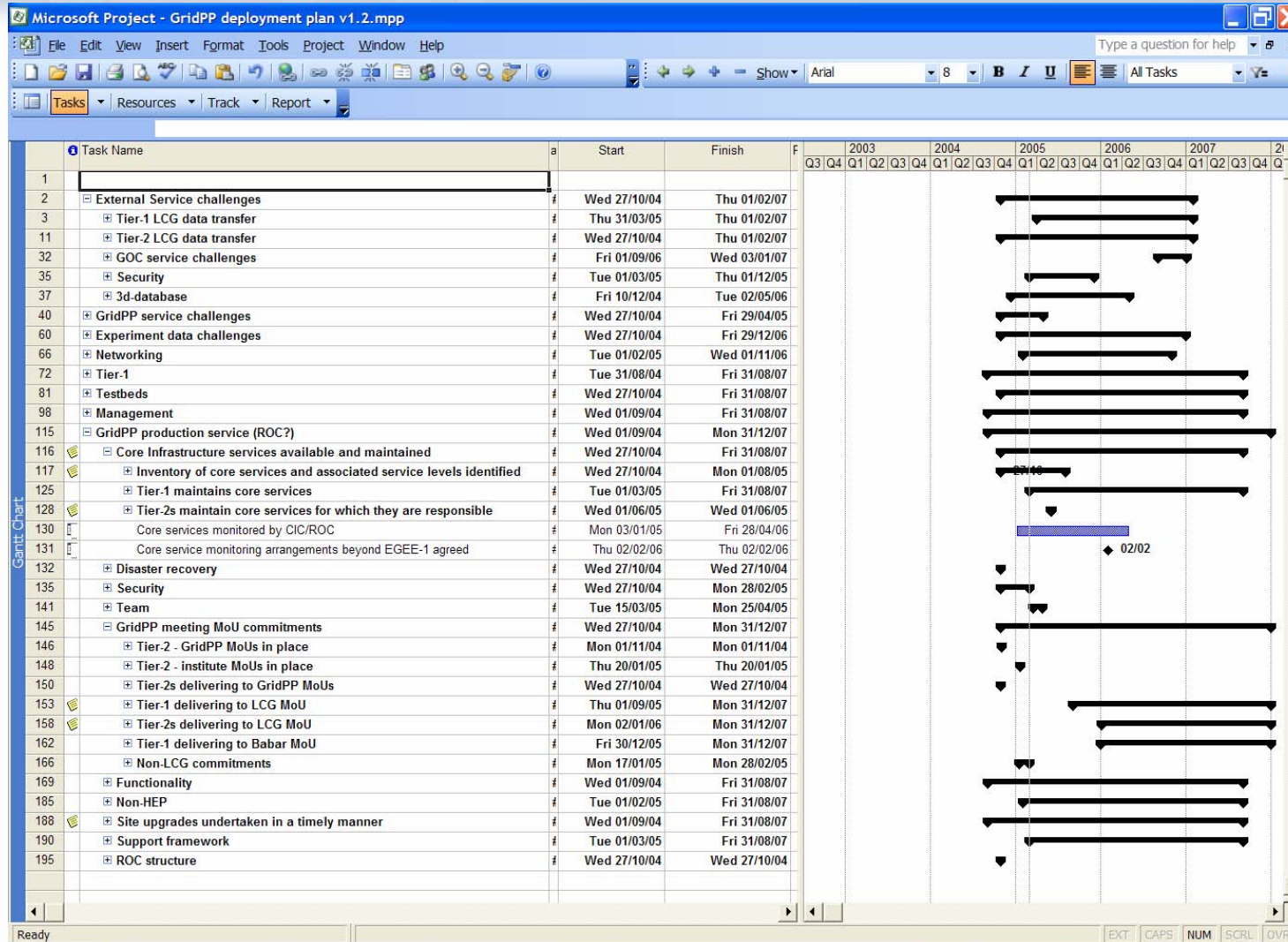
GridPP
UK Computing for Particle Physics

Deployment Update

Deployment Board
3rd March 2005

Jeremy Coles







GridPP Installations - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

http://www.gridpp.ac.uk/deployment/admin/install.html

Google GridPP Installations GIS Monitor 15:01:09 03/03/05 GMT Site Functional Tests report GIS Monitor 19:06:37 03/02/05 GMT

Welcome page · Current status · How to use the Grid · Website Help

GridPP
UK Computing for Particle Physics

Search

Deployment

- Overview
- Planning
- News
- Meetings
- Status
- Links
- Contact us

User Area

- Certificates
- User Interface
- Run a job
- Join a VO
- FAQs
- Getting support

Admin Area

- Installations
- Joining LCG2
- Site tests
- Maintaining a site
- Monitoring

Security

- Policies
- Guidelines
- Security updates
- Incident handling
- External monitoring

Installations

There are various components for installation of nodes for use with in GridPP, LCG and EGEE grids. In particular these range from the basic Operating System to middleware such as LCG supplied middleware or very particular components like DCache.

Operating System

Choosing which operating system is really a sites choice but there are certain recommendations that would be obvious. Using operating systems compatible with [Redhat](#) Enterprise linux is by far the most common thing to do. In particular the use of [Scientific Linux](#) is highly recommended. The current version in use within LCG is 3.0.X. The minor version X just matches the six month updates that redhat produce with their Redhat Enterprise Range.

Some useful links in these areas are:

- Scientific Linux
- Kickstart Howto
- LCG Wiki

In particular any tips or suggestions concerning installation with kickstart, such as how to mirror SL or will be placed there.

Installing LCG2

There are really two suggested methods that can be used, generic YAIM installation and the complete Quattor installation.

The main difference here is that YAIM is only a method for installation and configuration of LCG middleware. It is not a complete solution for installing nodes. YAIM must therefore be used in conjunction with some other installation such as writing kickstart files by hand. YAIMs interface is simple enough that it can probably be inserted into any installation method that you are using such as cfengine, xcat,....

Quattor is complete solution which will handle installation of nodes from bare metal, operating system and then LCG middleware.

Links in this area include:

- YAIM LCG generic install guide.
- Quattor homepage
- EGEE Quattor Working Group

The quattor homepage describes with tutorials and manuals how to install and use quattor in a generic way for installing and maintaining nodes. The EGEE quattor working group is coordinating the effort to use Quattor for the installation of grid nodes within EGEE and LCG.

Last modified Mon 28 February 2005 · [View page history](#)

[Switch to HTTPS](#) · [Website Help](#) · [Print View](#) · Built with [GridSite 1.0.2](#)

GridPP Open Source Policy

Done

We intend to release these pages shortly (next week) but will need to “smooth the edges a bit” over the next few weeks. Keeping good links is essential



GIIS Monitor 14:31:17 03/03/05 GMT - Mozilla Firefox

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

Google GridPP Installations **GIIS Monitor 14:31:17 03/03/05 GMT** Site Functional Tests report GIIS Monitor 19:06:37 03/02/05 GMT

[home](#) [alert](#) [table](#) [service](#) [regional](#) [rgma](#) [access](#) [service](#) [metrics](#) [links](#) ?

AsiaPacific	BNL	CERN	Canada	CentralEurope	China	FNAL	France	GermanySwitzerland	HP
India	Italy	Japan	NorthernEurope	Pakistan	Russia	SouthEasternEurope	SouthWesternEurope	UKI	

BHAM-LCG2 OK	BITLab-LCG SD	CAVENDISH-LCG2 OK	csTCDie JS	Durham OK	IC-LCG2 CT
Lancs-LCG2 SD	LivHEP-LCG2 SD	ManHEP-LCG2 CT	OXFORD-01-LCG2 OK	QMUL-eScience CT	RAL-LCG2 OK
RALPP-LCG OK	RHUL-LCG2 SD	ScotGRID-Edinburgh OK	scotgrid-gla SD	SHEFFIELD-LCG2 OK	UCL-CCC OK
UCL-HEP NA					

Color Legend

GSTAT	OK	INFO	NOTE	WARN	ERROR	CRIT	MAINT	OFF
SFT	OK	NonCrit	Crit	JobSub	JobList	Match	Sched	Down

No	Site Reports	GIIS Host	bdii	rgma	bnode	sanity	serv	version	totalCPU	freeCPU	runJob	waitJob	seAvail TB	seUsed TB	maxCPU	avgCPU	DI
1	csTCDie	gridgate.cs.tcd.ie	ok		ok			LCG-2 2 0	16	16	0	0	0.15	0.01	16	12	JS
2	BHAM-LCG2	epgce1.ph.bham.ac.uk	ok	ok		ok		LCG-2 3 0	22	20	1	0	0.02	0.00	22	14	OK
3	BITLab-LCG	dgc-grid-35.brunel.ac.uk	ok	ok		ok		LCG-2 2 0	1	1	0	0	0.40	0.00	1	0	SD
4	CAVENDISH-LCG2	serv03.hep.phy.cam.ac.uk	ok	ok		ok		LCG-2 3 0	1	1	0	0	0.05	0.00	3	1	OK
5	Durham	helmsley.dur.scotgrid.ac.uk	ok			ok		LCG-2 3 0	22	22	0	0	1.78	0.00	27	17	OK
6	IC-LCG2	gw39.hep.ph.ic.ac.uk	ok	ok	ok	ok		LCG-2 3 0	58	32	27	0	0.28	0.00	60	57	CT
7	Lancs-LCG2	hunegw.lancs.ac.uk	ok			error		na							24	20	SD
8	LivHEP-LCG2	hepgrid2.ph.liv.ac.uk	ok			error		na							0	0	SD
9	ManHEP-LCG2	bohr0001.tier2.hep.man.ac.uk	ok	ok		ok		LCG-2 3 0	98	88	4	56	0.05	0.05	98	85	CT
10	OXFORD-01-LCG2	t2ce01.physics.ox.ac.uk	ok	ok		ok		LCG-2 3 0	72	10	27	1	1.43	0.05	72	70	OK
11	QMUL-eScience	ce01.ph.qmul.ac.uk	ok			ok		LCG-2 1 0	568	362	0	0	0.06	0.03	576	528	CT
12	RAL-LCG2	site-bdii.gridpp.rl.ac.uk	ok	ok	ok	ok		LCG-2 3 0	968	44	484	216	932.42	1.71	2000	1883	OK
13	RALPP-LCG	site-bdii.pp.rl.ac.uk	ok	ok		ok		LCG-2 3 0	86	24	65	15	0.32	0.03	86	85	OK
14	RHUL-LCG2	ce1.pp.rhul.ac.uk	error			error		na							0	0	SD
15	SHEFFIELD-LCG2	lcgce0.shef.ac.uk	ok	ok		ok		LCG-2 3 0	163	31	148	0	2.14	0.01	166	163	OK
16	ScotGRID-Edinburgh	glenlivet.epcc.ed.ac.uk	ok	ok		ok		LCG-2 3 0	1	1	0	0	0.02	0.00	1	0	OK
17	UCL-CCC	ce-a.ccc.ucl.ac.uk	ok			ok		LCG-2 3 0	380	176	0	0	0.88	0.11	10630	330	OK
18	UCL-HEP	pc31.hep.ucl.ac.uk	ok			error		na							0	0	na
19	scotgrid-gla	ce1-gla.scotgrid.ac.uk	ok			error		na							0	0	SD
			sites	countries	totalCPU	freeCPU	runJob	waitJob	seAvail TB	seUsed TB	maxCPU	avgCPU					
Total			19	2	2456	828	756	288	940.06	2.06	13782	3265					

Done



Site Functional Tests report - Mozilla Firefox

http://lcg-testzone-reports.web.cern.ch/lcg-testzone-reports/cgi-bin/lastreport.cgi?dt=LCGVERSION&dt=SOFTWARE&dt=CAVER&dt=BROKERINFO&dt=RGMA&dt=CSI

GridPP Installations | GIIS Monitor 14:25:43 03/03/05 GMT | **Site Functional Tests report** | GIIS Monitor 19:06:37 03/02/05 GMT

OK	UKI	BHAM-LCG2	epgce1.ph.bham.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
SD	UKI	BITLab-LCG	dgc-grid-35.brunel.ac.uk	2005-03-03 06:05:12	LCG-2 2 0	LCG-2 2 0	OK	OK	??	OK	FAILED	FAILED	FAILED	FAILED	FAILED	FAILED	??	??
OK	UKI	CAVENDISH-LCG2	serv03.hep.phy.cam.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
JS	UKI	csTCDie	gridgate.cs.tcd.ie	2005-03-03 06:05:12	LCG-2 2 0	??	??	??	??	??	??	??	??	??	??	??	??	??
OK	UKI	Durham	helmslev.dur.scotgrid.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CT	UKI	IC-LCG2	gw39.hep.ph.ic.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	FAILED	OK	OK	OK	FAILED	FAILED	FAILED	FAILED	OK	OK	OK	FAILED
SD	UKI	Lancs-LCG2	hnegw.lancs.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	??	??	??	??	??	??	??	??	??	??	??	??	??
SD	UKI	LivHEP-LCG2	hepgrid2.ph.liv.ac.uk	2005-03-03 06:05:12	FAILED	??	??	??	??	??	??	??	??	??	??	??	??	??
CT	UKI	ManHEP-LCG2	bohr0001.tier2.hep.man.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	FAILED	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	UKI	OXFORD-01-LCG2	t2ce01.physics.ox.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
CT	UKI	QMUL-eScience	ce01.ph.qmul.ac.uk	2005-03-03 06:05:12	LCG-2 1 0	??	FAILED	OK	??	OK	OK	OK	OK	OK	OK	OK	OK	n/a
OK	UKI	RAL-LCG2	lgce01.gridpp.rl.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	UKI	RAL-LCG2	lgce02.gridpp.rl.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
OK	UKI	RALPP-LCG	heplnx201.pp.rl.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
SD	UKI	RHUL-LCG2	ce1.pp.rhul.ac.uk	2005-03-03 06:05:12	FAILED	??	??	??	??	??	??	??	??	??	??	??	??	??
OK	UKI	ScotGRID-Edinburgh	glenlivet.epcc.ed.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK
SD	UKI	scotgrid-gla	ce1-gla.scotgrid.ac.uk	2005-03-03 06:05:12	FAILED	??	??	??	??	??	??	??	??	??	??	??	??	??
OK	UKI	SHEFFIELD-LCG2	lgce0.shef.ac.uk	2005-03-03 06:05:12	LCG-2 3 0	LCG-2 3 0	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK	OK

Done



GIIS Monitor 19:06:37 03/02/05 GMT - Mozilla Firefox

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

Google GridPP Installations GIIS Monitor 14:31:17 03/03/05 GMT Site Functional Tests report GIIS Monitor 19:06:37 03/02/0...

05/01/26	8	50.0	40.0	2	5	1								0	0	0	0	7	0	0	0	1
05/01/25	8	50.0	20.0	2	5	1								0	4	0	2	1	0	0	0	1
05/01/24	8	50.0	20.0	2	5	1								0	4	0	2	1	0	0	0	1

UKI Service Metric

Date	Sites	SFT Metric	Gstat Metric	LCG-2_2_0	LCG-2_3_0	oldv	sd	jl	ok	nc	js	cr	.	ok	info	note	warn	error	crit	maint	off	
05/03/02	19	0.0	13.1	2	11	6								0	11	0	2	0	0	0	6	0
05/03/01	19	0.0	15.7	1	12	6								0	11	0	2	0	1	0	5	0
05/02/28	19	0.0	17.1	1	12	6								0	10	0	3	0	1	0	5	0
05/02/28	19	0.0	17.1	1	12	6								0	10	0	3	0	1	0	5	0
05/02/17	19	78.9	28.1	5	8	6								0	4	0	9	1	2	0	3	0
05/02/16	19	63.2	22.7	5	7	7								0	8	0	4	1	2	0	4	0
05/02/15	19	68.4	20.7	6	8	5								0	9	0	3	2	1	0	4	0
05/02/14	19	57.9	21.4	6	8	5								0	8	0	3	2	1	0	5	0
05/02/13	19	68.4	18.6	7	7	5								0	9	0	3	2	0	0	5	0
05/02/12	19	47.4	19.3	7	7	5								0	9	0	3	1	1	0	5	0
05/02/11	19	42.1	16.0	6	8	5								0	11	0	3	1	0	0	4	0
05/02/10	19	68.4	23.5	6	8	5								0	9	0	4	1	3	0	2	0
05/02/09	19	68.4	24.4	6	7	6								0	11	0	1	0	6	0	1	0
05/02/08	19	68.4	23.3	7	7	5								0	11	0	2	0	5	0	1	0
05/02/07	19	68.4	22.4	6	7	6								0	11	0	1	1	4	0	2	0
05/02/06	19	100.0	21.2	6	7	6								0	11	0	1	0	4	0	3	0
05/02/05	19	73.7	20.6	6	7	6								0	11	0	1	1	3	0	3	0
05/02/04	19	68.4	22.1	6	5	8								0	8	0	3	1	2	0	5	0
05/02/03	19	68.4	16.2	7	5	7								0	10	0	2	0	1	0	6	
05/02/02	19	73.7	20.0	7	5	7								0	9	0	1	1	2	0	6	
05/02/01	19	63.2	23.6	8	5	6								0	8	0	2	1	3	0	5	
05/01/31	19	68.4	20.7	9	4	6								0	9	0	2	1	2	0	5	
05/01/29	19	73.7	23.6	8	4	7								0	8	0	2	1	3	0	5	
05/01/28	18	66.7	27.3	9	4	5								0	7	0	2	2	4	0	3	
05/01/27	19	57.9	25.3	11	2	6								0	8	0	1	3	3	0	4	
05/01/26	19	57.9	40.0	11	2	6								0	1	0	0	12	3	0	3	
05/01/25	19	57.9	27.5	10	3	6								0	7	0	2	4	3	0	3	
05/01/24	19	57.9	27.5	10	3	6								0	7	0	2	4	3	0	3	

BNL Service Metric

Date	Sites	SFT Metric	Gstat Metric	LCG-2_2_0	LCG-2_3_0	oldv	sd	jl	ok	nc	js	cr	.	ok	info	note	warn	error	crit	maint	off	
05/03/02	1	0.0	40.0	0	1	0								0	0	0	0	1	0	0	0	0
05/03/01	1	0.0	40.0	0	1	0								0	0	0	0	1	0	0	0	0
05/02/28	1	0.0	40.0	0	1	0								0	0	0	0	1	0	0	0	0
05/02/28	1	0.0	40.0	0	1	0								0	0	0	0	1	0	0	0	0

Done

UKI is now being monitored and assessed within EGEE. We are getting better but our upgrades have been slow overall - partly due to SL3 changes at the same time.



- Continued lack of manpower
- Introduction of gLite
- Late availability of networking
- Hardware procurement problems
- Major security incident
- Grid deployed does not meet user needs
- Deployment mechanism



Selection of listed 115 issues

- Communication (LCG/EGEE)
- No single source of (monitoring) information
- Migrating between SRM solutions
- Scheduling of jobs across Tier-2s
- Ensuring sites keeping syslog files
- Lack of understanding of architecture
- Support structure
- “Grid vs local” access to storage
- Lack of knowledge about experiment use of Tier-2s
- Integration with experiments
- Quality of documentation
- “Get fit plan” for metric targets
- Use of application metrics
- University firewalls
- Impact of ARDA developments
- What does “available” really mean
- Clash between Experiment Data Challenges and Service Challenges
- Engagement of institutes in Service Challenges



Site responsibilities

- Report security incidents
- Respond to reported security incidents
- Respond to CIC on duty and ROC (user) mails
- Pro-active monitoring (hardware, functional tests .. RSS feeds only gives replica manager tests... look at gstat)
- Update software in a timely manner (in accordance with LCG release poliy)
- Run agreed software for users (VOs & expts) - e.g. mySQL, web-services?
- Meet scheduling requirements (UB or T2B)
- [What about local users? Where is user support. Does each site have a UI?]
- Notify community of upgrade/downtime schedules
- Feedback issues and coordinate work with Tier-2 coordinator
- Ensure hardware faults are resolved
- Keep backup of logs (dynamic)



- What are the EGEE security challenges
- What is the availability of data transfer tools for GridPP challenges
- Need for security officer to develop better tests - **when will they be recruited?**
- Experiment data challenges - we do not know plans. How should we find out? UB?
- If an **experiment wants to contact a group of sites** how do they do it? Need one contact for each Tier-2 for each VO! How do we monitor problems?
- Expt Tier-2 reps at T2 management meeting. How does this map within EGEE
- What level of disaster recovery planning is required and how does this overlap with the security area (physical security)
- Formal paper complaining about MW violating security policy - appendix SB mail to security list. Cover PBS issue (identity) and WNs outbound connectivity. Risks to site admins in deploying EGEE middleware.
- **What is the MW escalation route for security problems.** What procedures will inform people when things are fixed.
- CA rpms updated on 23rd but no notification given? Tests changed.
- Disk quotas? With 2.4.0 will have DPM/dCache. Can we have a formal UK request!?
- What are our obligations to publish security concerns with applications we would like deployed?



“To set some implementation priorities, what information do we want and will be useful?”

- Job success rate - functional tests are being put in database via R-GMA (6 weeks) (DK). Use L&B (DC). For site configuration use Savannah queries against sites (CIC).
- Use of UK Grid - Accounting views - use per VO per site. UK relative contribution to a VOs running (DK). Use of Ganglia information to indicate percentage of resources utilised.
- Storage - I/O rates into disk servers. Use data in gridFTP files (ML)
- Users -jobs submitted by user(s)
- Network bandwidth - sites to provide nominal network bandwidth data and site connection information (T2)
- STILL NEED to develop a “get fit plan”