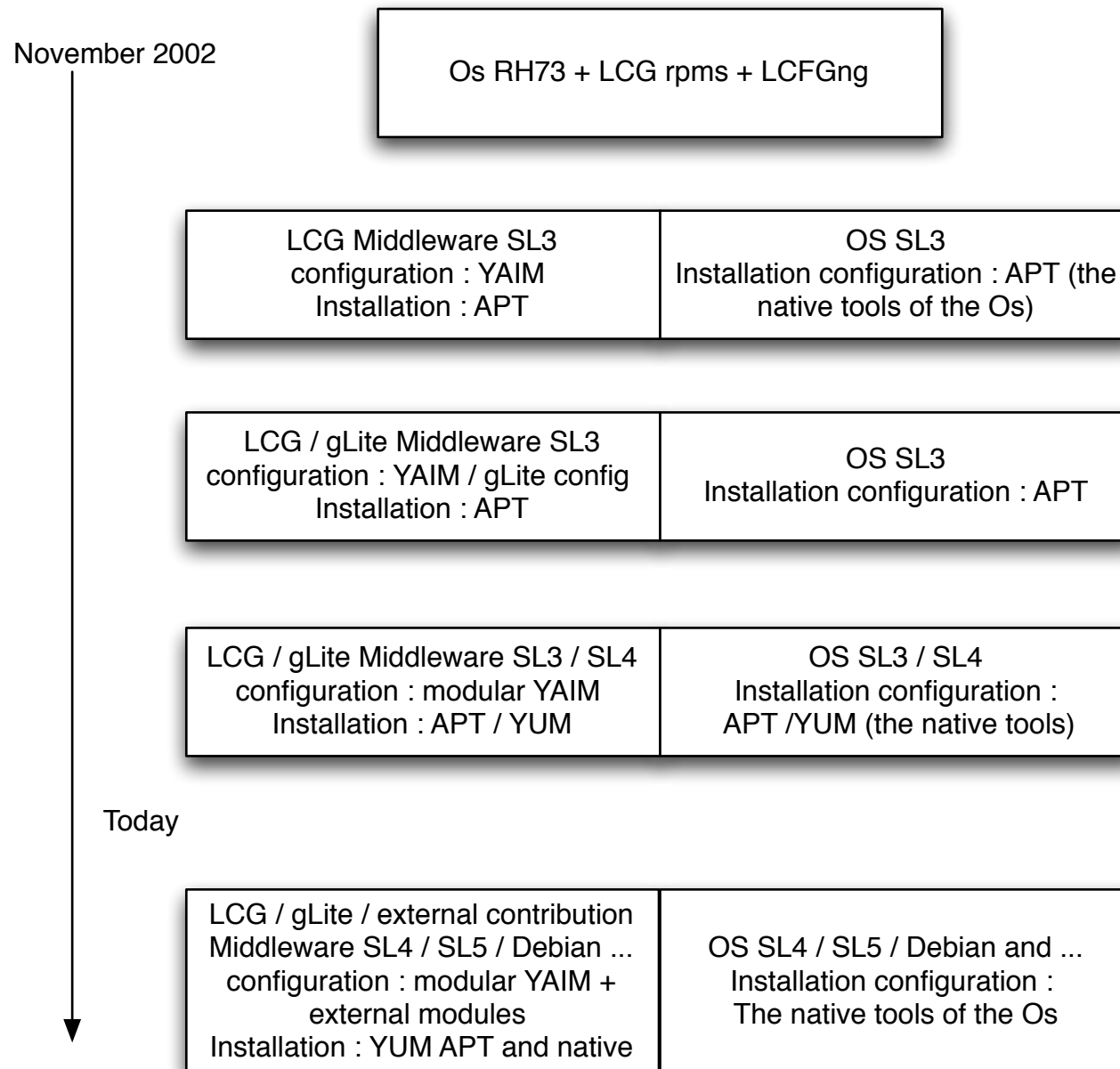


SA3 Deployment strategy

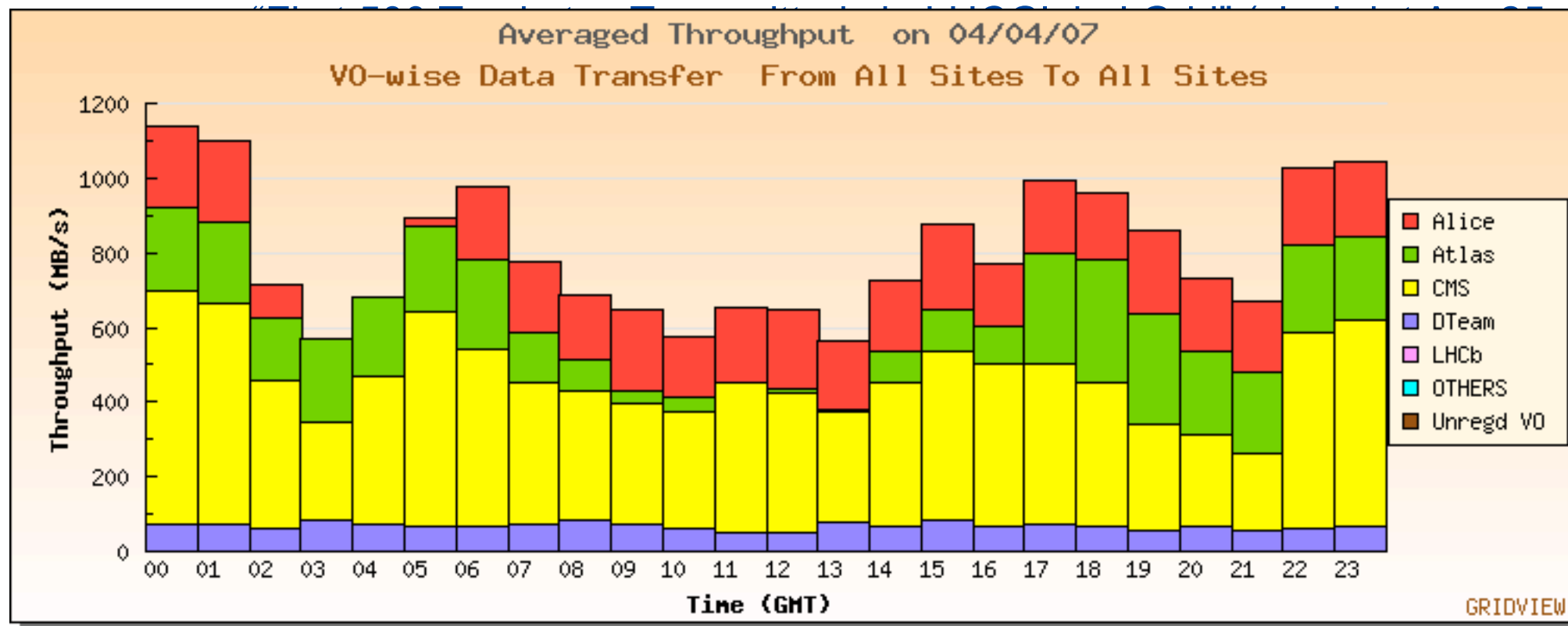
SA3 Group in Grid Deployment
Louis Poncet

- **What did we do during 5 years of middleware deployment in LCG.**
- **Contributions of worldwide SA3 partners.**
- **Components centric deployment model.**
- **Installation of middleware.**
- **Evolution of the configuration tool (YAIM).**
- **32 / 64 bits SL4 SL5 SLX and others.**
- **Still lots of things to do.**



- **Results :**
 - Data transfer worldwide record
 - “First 500 Terabytes Transmitted via LHCGlobal Grid” (slashdot Apr 25 2005).
 - Around 30K cpus on the grid active from 150 to 270 active site, 14 peta.
 - Around 30K jobs running per day.
 - BIOMED has used 420 Years of CPU time Worth of Data within 4 Months (slashdot Sep 17 2007).
- **Interoperability :**
 - Interoperation with OSG is perfectly working.
 - Interoperability with NAREGI ready.
- **Quality of cooperation increase every day.**

- Results :
 - Data transfer worldwide record



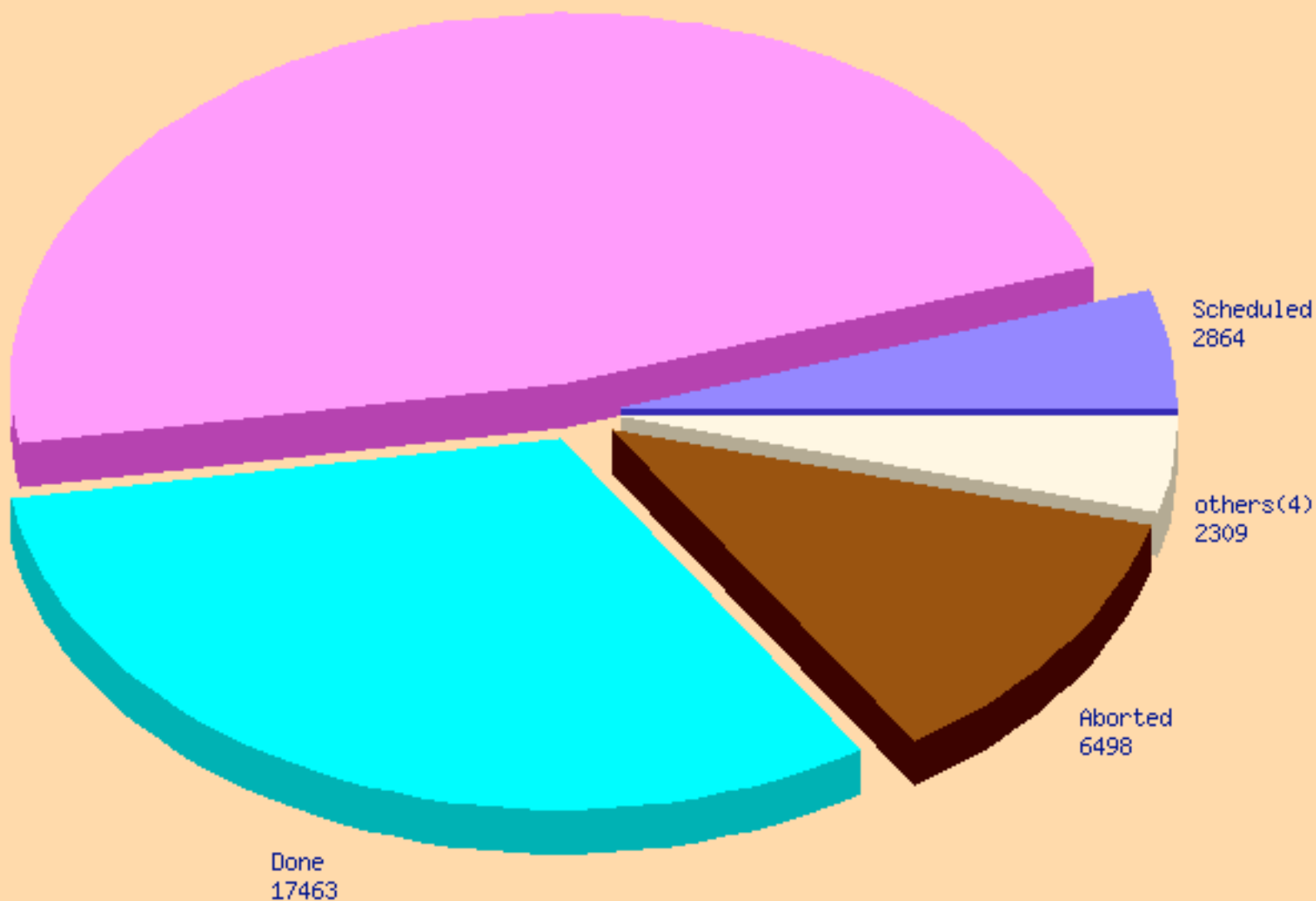
- Quality of cooperation increase every day.

Jobs on The day 04/04/2007

State-wise Job distribution

Running
26304

Throughput (MB/s)



GRIDVIEW

The certification Testbed now

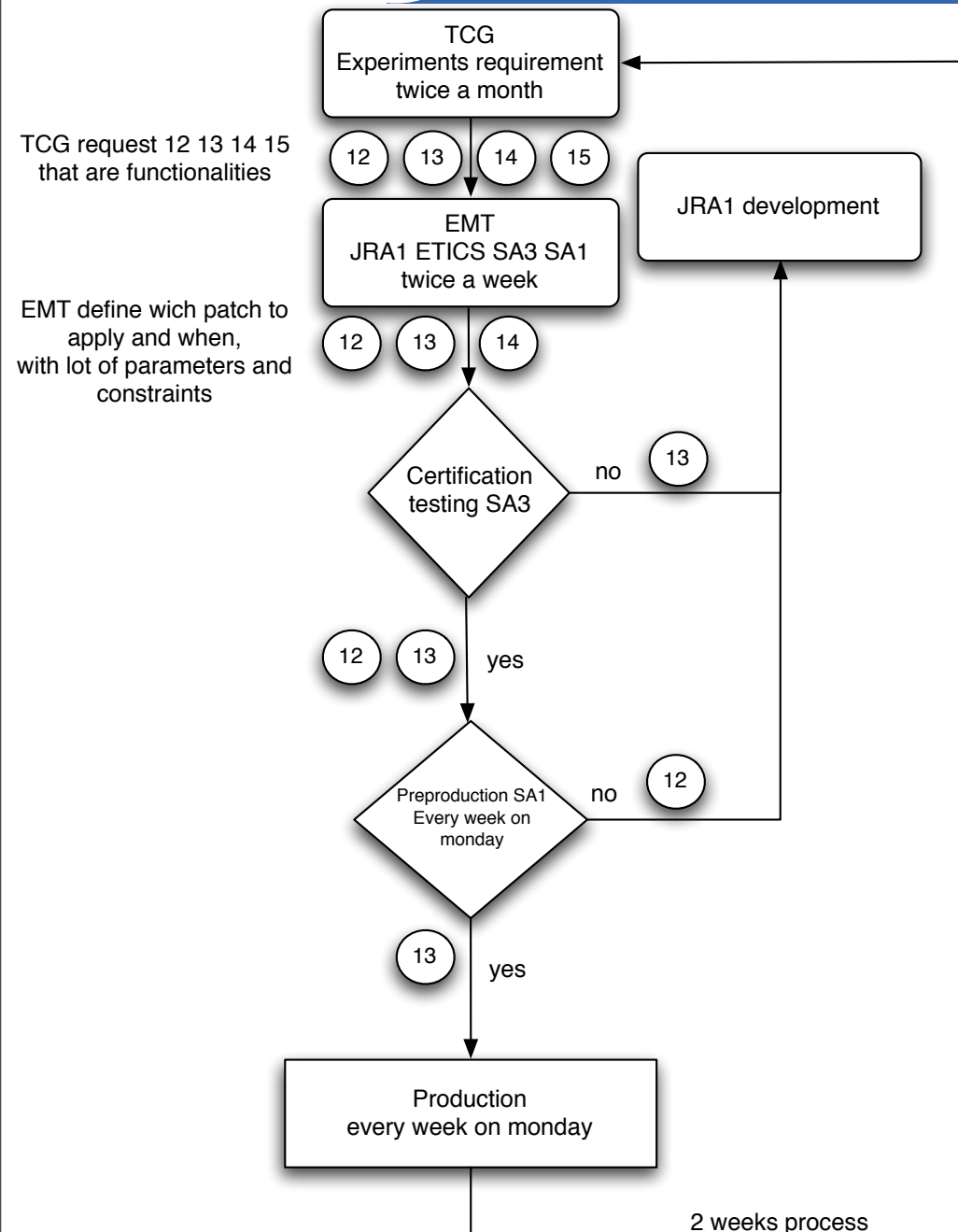
```
--(lponcet@lxb1765:pts/0)-----(/opt/glite/yaim/examples)--
--(12:06:%)-- lcg-infosites --vo dteam se                                --(Wed, Apr11)--
```

Avail Space(Kb)	Used Space(Kb)	Type	SEs
95730000	5200000	n.a	se201.grid.ucy.ac.cy
n.a	n.a	n.a	dublin.desy.de
17179199	671	n.a	cork.desy.de
15930000	2170000	n.a	ctb04.gridctb.uoa.gr
n.a	17270000	n.a	lxb1921.cern.ch
66590000	5690000	n.a	lxb1917.cern.ch
12460000	4810000	n.a	lxb2036.cern.ch
15105180	2080624	n.a	lxb0724.cern.ch

```
--(lponcet@lxb1765:pts/0)-----(/opt/glite/yaim/examples)--
--(12:07:%)-- lcg-infosites --vo dteam ce                                --(Wed, Apr11)--
```

#CPU	Free	Total	Jobs	Running	Waiting	Computing	Element
2	1	1	0	1			sa3-ce.egee.cesga.es:2119/jobmanager-lcgsge-dteam
1	1	0	0	0			ce201.grid.ucy.ac.cy:2119/blah-pbs-dteam
2	2	0	0	0			ctb03.gridctb.uoa.gr:2119/blah-pbs-dteam
8	6	0	0	0			wmstest-ce06.cr.cnaf.infn.it:2119/blah-lsf-short
8	6	0	0	0			wmstest-ce06.cr.cnaf.infn.it:2119/blah-lsf-long
8	6	0	0	0			wmstest-ce06.cr.cnaf.infn.it:2119/blah-lsf-infinite
8	6	0	0	0			wmstest-ce06.cr.cnaf.infn.it:2119/blah-lsf-default
2	2	2	0	2			lxb2018.cern.ch:2119/jobmanager-lcgpbs-dteam
2	0	2	0	2			lxb1905.cern.ch:2119/blah-pbs-dteam
2	0	12	2	10			lxb2034.cern.ch:2119/jobmanager-lcgpbs-dteam
200	200	0	0	0			lxb2035.cern.ch:2119/jobmanager-lcgpbs-dteam
200	200	0	0	0			lxb0743.cern.ch:2119/blah-pbs-dteam

- **Defined process to join the certification testbed from any site :**
 - <https://twiki.cern.ch/twiki/bin/view/EGEE/CertTestBedWorld>
- **Independent external testing process :**
 - https://twiki.cern.ch/twiki/bin/view/EGEE/GRNET_Test_Results
 - https://twiki.cern.ch/twiki/bin/view/EGEE/INFN_Test_Results
 - <http://grid-deployment.web.cern.ch/grid-deployment/tstg/validation.htm>
 - <https://twiki.cern.ch/twiki/bin/view/EGEE/SAthreeProgress>
- **Continuously running tests from CERN via the SAM monitoring tool developed by SA1 :**
 - <https://lxb0714.cern.ch/easysam/>
- **Virtualization at GD :**
 - <https://twiki.cern.ch/twiki/bin/view/Virtualization/GDVirtualization>
 - <https://indico.desy.de/conferenceDisplay.py?confId=155>



Tools used for this process :

- Twiki to track status and progress in the patch certification process.
- Patch submission from JRA1 to SA3 trough Savannah.
- Bug submission from SA3 and experiments trough Savannah.
- (Pre)Production general problems GGUS tickets.
- General discussion ROLLOUT mailing list.

- **Configuration problems with gLite components**
 - gLite arrived with python based config scripts provided by the developers.
 - Configuration data encoded in XML.
 - Site admin survey and internal evaluation showed that the system is too complex.
 - YAIM wrappers at a start.
 - YAIMification when ever possible.
- **Problems found**
 - XML too complex to edit.
 - The python code in the *config.py is really hard to debug.
 - The code is not directly compatible with next python version.
 - Why using a so advanced object oriented language to write configuration files ?

- **YAIM 3.0 is the previous YAIM for LCG components and a wrapper for gLite configuration tools**
 - It creates the XML files and runs the python scripts.
- **YAIM 3.1 has some major changes from YAIM 3.0.1.**
 - No more python in WN and UI configuration.
 - Modularization of components to permit external contribution.
 - Support for the external contributions with a very active group at CERN and a well maintain developer guide.
- **Future of YAIM**
 - Removing all python code.
 - Rewriting of all configuration scripts in bash to be integrate in YAIM.
 - <https://twiki.cern.ch/twiki/bin/view/EGEE/YaimDevelopersGuide>

Node	slc3 ia32 gcc323	slc4 ia32 gcc346	slc4 x86 64 gcc346
glite-WN	X	O	X
glite-UI	X	O	X
glite-WMS	X	O	X
glite-LB	O	O	X
glite-MON	X	X	X
glite-BDII	O	O	O
glite-PX	O	O	O
glite-CE	X	O	X
glite-TORQUE_utils	X	X	X
glite-TORQUE_client	X	O	X
glite-TORQUE_server	X	O	X
glite-VOMS_oracle	O	O	X
glite-VOMS_mysql	O	O	X
glite-SE_dpm_disk	O	O	X
glite-SE_dpm_mysql	O	O	X
glite-SE_dpm_oracle	O	O	X

Node	centos4 ia32 gcc346	SuSE9 ia32 gcc335	rhel3 ia32 gcc323
glite-WN	X	X	X
glite-UI	X	X	X
glite-WMS	X	X	X
glite-LB	X	X	X
glite-MON	X	X	X
glite-BDII	O	O	O
glite-PX	O	O	O
glite-CE	X	X	X
glite-TORQUE_utils	X	X	X
glite-TORQUE_client	X	X	X
glite-TORQUE_server	X	X	X
glite-VOMS_oracle	X	X	X
glite-VOMS_mysql	X	X	X
glite-SE_dpm_disk	X	X	X
glite-SE_dpm_mysql	X	X	X
glite-SE_dpm_oracle	X	X	X

Node	centos4 ia32 gcc346	SuSE9 ia32 gcc335	rhel3 ia32 gcc323
------	-------------------------------------	-----------------------------------	-----------------------------------

elite-MAN	▼	▼	▼
-----------	---	---	---

lcg-info	1.8.0-1	Missing
lcg-ManageVOTag	2.0.6-1	Missing
lcg_util	1.4.0-2	Missing
LFC-client	1.6.1-1	Missing
LFC-interfaces	1.6.1-1	Missing
log4cxx	0.9.7-1	Missing
xerces-c	2.7.0-1	Missing
a1_grid_env	2.0.0-1	Found
c-ares	1.3.0-4	Found
cleanup-grid-accounts	1.0.2-1	Found
glite-data-api-perl	1.1.1-1	Found
glite-data-catalog-api-perl	2.0.0-3	Found
glite-data-catalog-interface	2.0.0-8	Found
glite-data-transfer-interface	3.1.0-4	Found
glite-rgma-api-java	5.0.5-2	Found
glite-rgma-base	5.0.7-1	Found

glite-SE_dpm_mysql	▲	▲	▲
--------------------	---	---	---

glite-SE_dpm_oracle	✗	✗	✗
---------------------	---	---	---

Node	centos4 ia32 gcc346	SuSE9 ia32 gcc335	rhel3 ia32 gcc323
elite-MAN	✓	✓	✓

lcg-info	1.8.0-1	Missing
lcg-ManageVOTag	2.0.6-1	Missing
lcg_util	1.4.0-2	Missing

Installation:

1. Wrong xalan-c dependency in glite-security-voms-clients. [25699](#)
2. Wrong xalan-c dependency in lcg-ManageVOTag. [25702](#)
3. edg-gridftp-client fails due to wrong globus version in ETICS. [25703](#)
4. one of SAM test uses the script, edg-java-security-tomcat-test.sh, which is from edg-java-se
 - Piotr says that this test should be removed from SAM.

Configuration:

1. RGMA_HOME is not set as bug [25620](#), but in that bug a lot of missing env listed comparing t

Runtime:

- edg-gridftp-ls got Segmentation fault as bug [25617](#)

glite-data-catalog-interface	2.0.0-8	Found
glite-data-transfer-interface	3.1.0-4	Found
glite-rgma-api-java	5.0.5-2	Found
glite-rgma-base	5.0.7-1	Found
glite-SE_dpm_mysql	△	△
glite-SE_dpm_oracle	X	X

- **Maintaining the documentation is still a problem.**
 - The user guide is properly maintained by the EIS group (close to the experiment and properly maintain).
 - But the installation guide is hard to maintain cause of the amount of change on YAIM and friends at each cycle of the process.
- **We have problem to get the properly compiled part of the middle-ware.**
- **Testing scripts need to follow closely the evolution of the modules. Really hard to maintain.**
 - Too many and frequent changes to YAIM.
- **The permanent questions about bugs where does this problems come from :**
 - Configuration ?
 - Bug in the code ?
 - Site configuration (firewall, Os etc...)

