

Strategy for gLite multi-platform support

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Meeting: SA3 All Hands Meeting
Location: TCD, Dublin
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Builds using ETICS version: 1.2.1-1

Worker Node Build Status														
ARCH	OS TYPE	VERSION	DISTRO	VDT	deps	GridIre	Basic	VOMS	RGMA	DM	gfal	WN	Full	torque
ia32	CentOS	4	yum	3/3	30/30	2/2	9/9	14/14	45/45	17/17	20/20	108/108	344/374	3/3
	SuSE	9	apt	3/3	28/28	2/2	14/14	15/15	45/45	17/17	20/20	106/106	312/365	3/3
	CentOS	5	yum	1/1	24/24	2/2	9/9	10/15	24/45	0/17	0/19	63/99	226/368	3/3
	Solaris	10	pkg/tarball	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
x86_64	CentOS	4	yum	1/1	5/16	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	SuSE	9	apt	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
powerpc	Mac OS X	10.4	fink/tarball	2/2	17/23	N/A	8/9	1/15	36/46	0/17	11/29	42/61	182/361	N/A
	Mac OS X	10.3	fink/tarball	2/2	18/23	N/A	8/9	1/15	36/46	0/17	11/29	44/62	186/354	N/A
	AIX	5	rpm/tarball	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Legend	Colour					
	Meaning	To be Started	Started	DONE	Vendor Built	Not Possible

Builds using ETICS version: 1.3.1-1

Worker Node Build Status														
ARCH	OS TYPE	VERSION	DISTRO	VDT	deps	GridIre	Basic	VOMS	RGMA	DM	gfal	WN	Full	torque
ia32	CentOS	4	yum	3/3	30/30	2/2	12/12	14/14	45/45	17/17	20/20	108/108	343/379	3/3
	SuSE	9	apt	3/3	28/28	2/2	12/12	14/14	45/45	17/17	20/20	106/106	313/374	3/3
	CentOS	5	yum	1/1	24/24	2/2	9/9	14/14	36/40	0/17	0/19	63/99	234/378	3/3
	Solaris	10	pkg/tarball	1/1	23/23	2/2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3/3
x86_64	CentOS	4	yum	1/1	26/26	2/2	9/9	15/15	34/45	12/17	N/A	66/105	N/A	3/3
	SLES	9	apt	1/1	24/24	1/1	9/9	10/15	N/A	N/A	N/A	N/A	239/375	3/3
powerpc	Mac OS X	10.4	fink/tarball	1/1	23/23	1/1	0/11	1/15	36/46	0/17	11/29	42/61	170/380	3/3
	Mac OS X	10.3	fink/tarball	1/1	23/23	1/1	0/11	1/15	36/46	0/17	11/29	44/62	175/380	3/3
	AIX	5	rpm/tarball	1/1	18/22	1/2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3/3

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Two working repositories (ignore sl3):

<http://grid.ie/distribution/glite/R3.1/glite-WN/suse9>

<http://grid.ie/distribution/glite/R3.1/glite-WN/centos4>

Also available Torque clients:

[glite/R3.1/glite-TORQUE_client/suse9](http://grid.ie/distribution/glite/R3.1/glite-TORQUE_client/suse9)

[glite/R3.1/glite-TORQUE_client/centos4](http://grid.ie/distribution/glite/R3.1/glite-TORQUE_client/centos4)

These are constantly upgraded, currently version: 3.1.0-6

Package Name and Version

Reason for RPM changes

boost|1.32.0-6

CGSI_gSOAP_2.6|1.1.15-6

glite-data-catalog-api-c|2.0.0-7

glite-data-catalog-cli|1.7.4-1

glite-data-srm-api-c|1.1.0-9

glite-data-srm-api-perl|1.1.0-3

glite-data-srm-cli|1.2.8-5

glite-data-transfer-api-c|3.3.0-4

glite-data-transfer-api-perl|3.3.0-1

glite-data-transfer-cli|3.4.2-2

glite-data-delegation-cli|2.0.0-4

glite-data-delegation-api-c|2.0.0-4

glite-data-util-c|1.2.3-1

glite-lb-client|2.3.4-1

glite-lb-common|5.1.2-2

glite-wms-common|3.1.17-1

perl-SOAP-Lite|0.65.6-1

Boost not available in OS

dm-util requires this, whereas srm/transfer require 2.7

glite packager: Missing ext.axis.version

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Needed by newer glite-data-transfer-cli

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glite packager: Missing ext.axis.version

Needs glite-lb-common (newer version)

Missing a -p in mkdir \${REPORTS}

3.1.13 configuration is missing

Use /usr/bin/env for portability

 EGEE Oct'07

 EGEE Oct'07 + Dec'07

Debian x86_64

- **Adrian (overview)**

Ubuntu

- **Åke (Ubuntu port) has built 85% of the gLite middleware but has not tested it.**
- **Åke wants to see personalised views of the web interface which we suggested at EGEE '07.**
- **Work will continue on this after Christmas.**

Use the porting guide:

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

10 step guide covering building of:

- ETICS, globus, dependencies, Base Modules, VOMS, RGMA, DM/GFAL and the WN meta-package

- **OS platform independence**
 - PyXML must be installed before 4Suite (bug #31206)
 - May need to change 4Suite BuildExt.py (bug #31452)
 - May need to change pyopenssl libraries (bug #31454)
- **Platform specific issues**
 - Psyco gives issues for some Python ≥ 2.4 (bug #31763)
 - PlatformUtils.py may not pick up your OS (bug #31750, #29173)
 - Proxies not supported by Python 2.4 (bug #29578)
 - lib64/lib issues (bug #29168, #29170)
- **Local-site builds**
 - etics-tmp removed if build fails (bug #31883)
 - Caching of store.xml not supported with --merge (bug #31926)
 - Runaway load from mingetty (Xen issue)
 - packageTypes.xml may not contain a definition for your OS

- **VDT is now defined in its own project**
- **There is a source build configuration:**
 - “globus v. 4.0.5-VDT-1.8.1-1src”
- **Required environment variables:**
 - JAVA_HOME for OS specific Java implementations
 - PERL5LIB to set location of XML::Parser
 - PATH for /usr/ccs/bin:/usr/local/bin etc
- **Configuration step may require adding --with-iodbc or removing --disable-rls, --disable-drs, --disable-gsiopenssh in certain cases**
- **Multiple tarball packaging is not possible in ETICS**
- **Windows: Java Web-service code only**
- **asctime_r bug in GRAM code (bug #31666)**

- **Python tarball generator used to generate binary tarballs and strip install directories**

```
tarball-creator.py --name=expat --packager=deb --first=/usr --age
```

- /lib64 → ./lib64
- /usr/include → ./include
- /usr/bin → ./bin
- /etc → ./etc

- **log4cxx used by RGMA is the only badly written external package (many #include's missing)**
- **classads needs upgrade to version 0.9.9 for gcc-4 compilers**

- **edg-gridftp-client requires VDT globus to build**
- **yaim-core/yaim-clients required for WN install**
- **plus a few other noarch modules**

- **Windows and Mac OS X issue: pool account setup**
- **Mac OS X will use active directory with ldap v3, which is very easy to configure with Yaim**

- **Copyright & Licence issues in SPEC files (bug #31882)**
- **gLite packager still used, leading to RHEL5 variant compile issues similar to those under SuSE/SLES (bug #27471)**
- **Problematic SPEC files building nothing (bug #26683)**

- Akos and Vincenzo have worked to modify the ARC VOMS patches for compilation against OpenSSL 0.9.8 that Åke gave us at EGEE '07 (bug #31191).
- There is only one lib64 related expat issue currently, but many more expected soon, with move to Unix porting!

LCG-DM

- **Requires VOMS to build:**
 - voms, voms-api, voms-api-c, voms-api-cpp, voms-client
- **Oracle removal still an issue for ETICS**
- **Missing setups for different OSes are required (inform Akos, e.g. centos4.requires)**

GFAL

- **Deployment issues (SE domain name bug #30123)**
- **Previously stat/stat64 bugs under Mac OS X**

- **There are other LB/WMS issues and differences**
- **SA3 lists for certification, PPS and production must be compared with the generated build repositories to obtain a working glite-WN meta-package.**
- **We have added some extra functionality:**
 - `check-missing-dependencies.sh`
 - `create-tcd-repositories.sh`
 - patched glite-release code for yum/apt repository generation
- **Step 10: Rollback, this is not a simple task. Needs a formal analysis for the build system to pinpoint pending issues.**

- **A lot of time is spent upgrading ETICS, fixing ETICS bug and achieving platform independence for ETICS.**
- **ETICS is a powerful tool that is going to get the job done. We need ETICS!**
- **Most of our issues so far are platform specific configuration issues, handled well by ETICS, e.g: build configuration changes, environment variable changes. Default x86/x86_64 configurations are a must!**
- **Porting has hardly begun, however VOMS and LCG-DM/GFAL will be put through their paces with Unix porting.**
- **End of March target: 4-7 non-SLC4 supported Linux platform (including Debian x86/x86_64) + Mac OS X.**