

IT Cluster Summary

*JRA1 All Hands Meeting
CERN, 24-26 October 2007*

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- **DGAS**

- new dgas.service-common includes some parts of dgas.common used only on the server side
 - Less dependencies on the client modules
 - Easier portability of DGAS clients and sensors

- **WMS/WMS-UI**

- Removed deprecated features
 - Checkpointing, partitioning
- Removed unneeded UI dependencies
 - wms-common and wms-configuration
- General dependency cleanup

- **OLD UI:**
 - Commands were spread into different components/subsystems:
 - wms-ui.cli-python
 - *Python commands to LB server*
 - *status & logging-info*
 - wms.client
 - *C++ commands to WMPProxy server*
 - *Submission, cancellation, get-output, list-match,...*
 - Libraries were spread into different components:
 - wms-ui.cli-python
 - *Python modules*
 - wms-ui.wrap-python
 - *Swig modules around C++ APIs*

- **NEW UI:**
 - wms-ui.api-python
 - Contains all python/swig modules/libraries
 - More user-friendly interface (API style)
 - wms-ui.commands
 - Contains all python (LB) & C++ (WMPProxy) commands
 - wms.wmproxy-api-* still under org.glite.wms
 - Which relation should be between a metapackage and a subsystem?

- **A WMS almost equivalent to patch #1251 is under test**
 - with the official globus gridftp using lcms-based authz
 - RPMs produced with ETICS
 - the installation and configuration are still partially manual
- **CREAM is under test**
 - on top of **BLAH**
 - passed acceptance tests
 - moving towards certification (expected in December)
- **DGAS, VOMS and VOMS-Admin builds are available**
- **Although now ETICS reports failures**
 - Starting with proxy renewal

- **Mainly a build exercise**
- **CREAM, DGAS, BLAH, VOMS, VOMS-Admin builds are available**
- **WMS and WMS-UI not yet**
 - not much effort yet
 - but some deps are not correct
 - libclassad.a built without -fPIC
 - org.glite.security.gsoap-plugin uses gsoap-2.7.9b
 - Proxy renewal fails
 - ...

- **WMS from the 3.1 development branch**
 - With the corresponding LB
- **Available in production since mid-September**
- **Improved stability and performance**
 - direct management of job collections and bulk matchmaking
- **Since then two critical bugs**
 - #29737: corrected by patch #1466 (involving LB client)
 - #30518: being fixed
- **SLC3 only, built with the old ant-based build system**
- **Major stability problem is due to lack of a good recovery procedure**

- **Moving to security delegation v. 2.0.0**
 - Client/Server already partially implemented in HEAD and being tested
 - Breaks backward compatibility (delegation namespace changed)
 - Current (1.1.18) gridsite does not implement all needed features
 - Proposed (1.5) gridsite has interface changes and breaks WMPProxy compilation
 - Under investigation by gridsite people
- **Memory optimization in ICE for job cache**
- **Signal handling in the Job Wrapper**
 - Interaction with job preemption on some sites, which also affects the shallow resubmission

- **JSDL support**
 - XML parsing done (now based on xerces)
 - Integration with gSoap on-going
 - Currently not as expressive as JDL
- **Major restructuring for the WM**
 - Code cleanup and simplification
- **How reliable is the information published in the IS?**
- **On-going discussion on matchmaking based on the authorization information**
 - Follow Thursday afternoon session

- **Almost ready to start applying the recommendations**
 1. Review all our logging statements
 2. Modify the code (in the main CVS trunk)
- **Which library (for C++)?**
 - Any
 - Client calls based on macros
 - Predefined macros for “standard” loggers

```
LOG_ACCESS_FATAL << "this is fatal";  
LOG_ACCESS_ERROR << "this is an error (errno = " << 2 << ')';  
LOG_ACCESS_WARN << "this is a warning";  
LOG_ACCESS_INFO << "for your information";  
LOG_ACCESS_DEBUG << "blah blah blah";
```

- **Advantages**

- Can be implemented on top of multiple logging libs (currently log4cpp-1.0.x)
- Don't evaluate message construction if no need to log (e.g. if the level is too low)
 - `if (!access_log().isInfoEnabled()) ; else
access_log().infoStream() << "for your information";`
- Compile to no-op if logging is disabled at compile time
 - `if (true) ; elseNullStream() << "this is fatal";`
(which disappears in the actual code)
 - Useful in order to have logging in libs (e.g. for testing purposes)

- **Provide a key/value abstraction**

- `LOG_ACCESS_ERROR << KeyValue("errno", errno);`

- **Heavy testing in view of the certification**
 - Passed the acceptance tests
 - See presentation on Friday
- **Proxy renewal approach is being refined**
 - Need a full database for the mapping between delegation id and associated jobs
 - Current database backend (JNDI) does not support indexing

- **Testing and bug fixing**
 - For the now-terminated gLite CE
 - For the CREAM CE
- **Further development going on in the main CVS trunk**
 - changes for use of BLAH by Condor were merged into HEAD
 - the submit scripts were re-arranged for better ease of porting
 - proxy transfer eventually replaced by GSI proxy delegation for the proxy renewal daemon
 - keep Condor in the loop of BLAH changes: version BLAH independently and maintain a stable and a development branch.
 - provide support to the current BLParser async notification mechanism for batch systems other than LSF and PBS

- **Restructuring of the sensors**
 - Decoupled the packaging of the sensors from the packaging of the generic clients and API
 - On-going activity to decouple UR production on the CE and their delivery to the HLR
- **Rewrite of dgas2apel is on-going**
 - to be able to run it also on a second-level HLR and not only on a site HLR
- **Adoption of the common logging recommendations**
 - Same solution adopted for the WMS
- **Global review of the code and DB schemas**
 - easier management, better performance, standardization

- **Development:**
 - Logging support consistent with the security logging document
 - Ability to contact the server via plain SSL
 - Support for short FQANs
 - New version of the FQAN specification doc is in the works
 - Rewritten access to DB (ongoing)
 - Takes advantage of native DB abilities
 - No longer need write access to DB
 - AC Serial numbers are no longer stored there
 - Short term items in the dependency challenge review done
 - Work on long term items has started
 - Handles users with multiple certificates
- **Version 1.8.0 is almost ready**

- **Certification of voms-admin 2.0 almost finished**
- **Development:**
 - Support for users with multiple certificates
 - BIG effort for certification of 2.0
 - Dealt with security issues
 - Work on short term items of the dependency challenge is paused due to a bug in ETICS

- **Follow Thursday afternoon discussion on the authorization service**