Experiences with the Installation of the Available JRA Software Packages

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Since January 2009 Karoly Bosa is employed in 1/5 time.

Main Task: **Make the first installation** of the existing version of **JRA softwares outside of the developer groups** and getting some experiences.

The complete description of this work will be a Technical Report – A step-by-step installation manual (approx. by the end of November).

Contents:
- Identifying the sources of the used software packages,
- Identifying the available documentation for installation and testing,
- Installation of GAP and SCSCP package
- Installation of D5.1
- Installation of D5.2
- Installation of D5.3
Sources of the Used JRA Software Packages

- Project Homepage: http://www.symbolic-computation.org/Downloads (some links does not work, e.g.: parallelGHC, SymGrid-Par).

- SCIEnce VMware: science.mcs.st-andrews.ac.uk (for required GAP packages or for newer versions of some JRA softwares).

- Svn repository: svn://campbell.mcs.st-and.ac.uk/science (Most of the JRA softwares are available only in their first version, no up-to-date version)

- Some other URLs in the case of some third party softwares.

**Recommendation:** Every new versions should be checked in at least in the svn repository (some used third party softwares as well).
Sources of the Available Documentation

- Project Homepage (not sufficient)
  http://www.symbolic-computation.org/Downloads

- Detailed readme files enclosed to the software packages (very useful, but sometimes missing).

- Documented Test Cases (e.g.: in readme files, commented ant build files).
Installation of GAP and SCSCP package

- **Availability**: OK (Required Packages were available on the given URL)
- **Installation and testing**: OK
- **Documentation**: Sufficient
- **Comment**: An additional help was the installed instances of the packages on the SCIEnce VMware.
Recall: CAGS allows Computer Algebra Systems to leverage the computing capabilities offered by external Grid or Web services.

**CAGS** is not buildable under Globus Toolkit 4.2.x (Although Globus 4.2 is installed on the SCIEnce VMware and CAGS documentation is refers to this Globus version).

Building and Installation under Globus 4.0.7: OK

Documentation: OK (Sufficient documentation for installation and testing)
The tests work mostly (after some minor syntax errors in Test.java).

Comments about Testing:

- **ant create-proxy** (works, but created proxy is too permissive. Maximum allowable permissions are 600 (not 644). Other components of globus do not work with such a proxy.

- **ant gs-oplist** does not work.

- **ant run-job** (works, but two minor bug is discovered:
  1. Handling of executable without argument, try <property name="job.executable" value="/bin/hostname" />
  2. If the output file already exists, the new output is appended to the previous content (is it intended?).
Installation of D5.1: scienceGAP Package

- **scienceGAP** package does not work because of the missing `sgjava.sh`.

- `sgjava.sh` is mentioned in the file `init.g` of scienceGAP package as an important component, but no such file in any available instance of the software package.

- No manual.pdf is available in the doc directory of the scienceGAP package (however it is referred in the readme).
Installation of D5.1: GAPService and Portal

- **GridServices and Portal Installation:** OK

- **Remark:** The user has to copy the file Gap.path to the directory /tmp after every reboot?!

- **Portal Test:** OK (with non-secure globus container).

- **GAPService Test:** The portal is not able to list the available method of this service.
Installation of D5.2: **Dynamic Composition Framework**

- Third party dependency: ActiveBPEL 3.0 (since this year later versions than 2.1 are not freely available any more).

- IeAT uses ActiveBPEL 5.0.2 for the new version of this software (release at end of October…).

- ActiveBPEL 5.0.2 seems to be not compatible with the old version contained by the deliverable (build error).
Installation of D5.3: **CAS Server and Client (for GAP)**

- Server Status: ActiveBPEL dependency (the same as in the case of D5.2: Dynamic Composition Framework),

- Installation of the Client: OK

- Test: ???

- Comment: New version is under development by IeAT (release at end of October…).
Installation of D5.3: parallelGHC and SymGrid-Par

- Installation of parallelGHC: OK (documentation sufficient)

- Installation of SymGrid-Par: Insufficient documentation (only few words on Project Homepage).

- I am looking forward to the SymGrid-Par Installation and Demo…
Conclusion

- D5.1: CAGS is OK (minor comments)
- D5.1: scienceGAP: the file sgjava.sh should included into the publicly available packages
- D5.1: GAPService and Portal
- D5.2: **Dynamic Composition Framework**: Waiting for new version compatible with the available third party softwares!
- D5.3: **CAS Server and Client (for GAP)**: Same!
- D5.3: SymGrid-Par: Need more information for installation (documentation and packages should be available at one public place)!