

Report No.1 on Globus Toolkit 4 evaluation by joint JINR (Dubna), KIAM and SINP MSU team

Phase 1: Studying documentation and GT4 installation

Documentation: we have found the documentation on www.globus.org is quite a complete and well organized, some problems we encountered at this first phase were resolved with the help of support from the Globus team via gt4-friends mailing list.

2) Installation

GT4.0.0 was installed and properly configured on a number of platforms (in total on 7 machines):

- Fedora Core 3 – using the Fedora Core 3 Binary Installer from <http://www.globus.org/toolkit/downloads/4.0.0/>
- Redhat 9 – using the RedHat 9 Binary Installer + Patches from <http://www.globus.org/toolkit/downloads/4.0.0/>
- SLC3 (Scientific Linux Cern Release 3.0.4) - using the Source Instsaller from <http://www.globus.org/toolkit/downloads/4.0.0/>
- SL4 (Scientific Linux Release 4.0) - using the RPMs file from <ftp://ftp.linux-ink.ru/pub/SL/40/projects/GRID+HEP>

Some problems appeared only with installation on SLC3. They were caused by incompatible versions of Java and Ant in this distribution. After substitution those versions with appropriate (according to advice from Charles Bacon via gt4-friends mailing list) the installation went without problems. For further evaluation, we consider the SL/SLC releases as most important because they are basic platforms in CERN and EGEE project.

Another minor problem appered while configuring simpleCA on multiple machines :
[root]# \$GLOBUS_LOCATION /setup/globus_simple_ca_8d4f2ad0_setup/setup-gsi-default

produced an error. Again the problem was resolved with the help of gt4-friends mailing list:

```
copy files in $GLOBUS_LOCATION/setup/globus_simple_ca_hash_setup
  grid-security-config.in to grid.security-config
  grid-cert-request-config.in to grid-cert-request-config
```

```
edit those files and replace first line #! @SH@ with your shell (in my case #!/bin/sh), then run
```

```
$GLOBUS_LOCATION/setup/globus_simple_ca_hash_setup/setup-gsi-default
```

- First functional tests were carried out on all platforms and by using both the Standalone Container and Tomcat, in particlar:
 - submitting jobs to GRAM-fork with explicit using Delegation Service u staging (executable, stdin, stdout);
 - sending files via FTP;
 - deployment of custom services into the Standalone Container (according to B.Satomayor's Tutorial)

Basically, all the tests went successfully. However, an attempt to deploy GRAM into Tomcat failed: in this case **globusrun-ws** returns an error

```
SOAP Message Transport failed: Error in HTTP response
```

Globus team confirmed that in GT4.0.0 GRAM does not work in the Tomcat.

Currently we are continuing various functional test and preparing some performance tests.