GridBench Installation Guide

Grid Benchmarking

Task 2.3 - Benchmarking

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Abstract: This is the installation guide for the GridBench client and server components.

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1 About the software

The software (GridBench) is a tool for benchmarking and testing Grids. The tool can be used to invoke benchmarks on Grid resources, archive the results and analyze them.

1.1 Software components

GridBench is made up of a server component and a client component. The Server is implemented as a set of Webservices while the client can be run as stand-alone or as part of the Migrating Desktop. In this guide only stand-alone installation of the client is described.

1.2 Dependencies

Server side

- Java 1.4.x
- Tomcat 4.x
- MySQL 4.x
- "User Interface" machine (for Globus/EDG job submission). It is recomended that the GridBench services are installed on the RAS.

Client side

- Java 1.4.x

2 Installation in the CrossGrid testbed

2.1 rpm lists for LCFG

`gridbench-x.i386.rpm`

Manual post installation steps:
As root execute:

```
mysql -S /tmp/mysql.sock < /opt/cg/share/gridbench/gb_init.sql
```

3 Manual Installation

3.1 Download

Download file wp2_3-bench.tar.gz from:

```
https://gridportal.fzk.de/cgi-bin/viewcvs.cgi/crossgrid/crossgrid/wp2/wp2_3-bench/
                              wp2_3-bench.tar.gz?tarball=1&only_with_tag=v0_9_9
```

3.2 Installation from rpm

3.2.1 Install Dependencies

```
https://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/external/
        batik-1.1.1-4jpp.noarch.rpm
        rhino-1.5-0.R3.1jpp.noarch.rpm
        xml-commons-1.0-0.b2.3jpp.noarch.rpm
        xml-commons-apis-1.0-0.b2.3jpp.noarch.rpm
        xml-commons-resolver-1.0-1jpp.noarch.rpm

https://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/lcg/external/
        bouncycastle-jdk14-1.19-2.noarch.rpm
        cog-jar-1.1-1.i386.rpm

https://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/cg/external/
        jakarta-axis-1.2alpha-cg3.noarch.rpm
        jakarta-commons-logging-1.0.3-cg3.noarch.rpm
        jfreechart-0.9.21-cg1.noarch.rpm
        jcommon-0.9.6-cg1.noarch.rpm
        xerces-j2-2.6.2-cg1.noarch.rpm

https://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/cg/wp3/
        cg-wp3.3.3-jims-client-1.4.35-1.noarch.rpm
        cg-wp3.3.3-jims-commons-1.4.35-1.noarch.rpm
```

(These are not yet set as dependencies in the RPM)

NOT PACKAGED YET:
Copy `http://www2.cs.ucy.ac.cy/ georget/mysql-connector-java-3.0.15-ga-bin.jar` to `/opt/cg/share/java`

3.2.2 Install RPM

Download:

```
https://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/cg/wp2/gridbench-0.9.9-1.i386.rpm
```

then

```
rpm -Uvh gridbench-0.9.9-1.i386.rpm
```

.

3.3 Installation from source

Download file wp2_3-bench.tar.gz from:

```
https://gridportal.fzk.de/cgi-bin/viewcvs.cgi/crossgrid/crossgrid/wp2/wp2_3-bench/
                wp2_3-bench.tar.gz?tarball=1&only_with_tag=v0_9_9
```

Untar the file:

```
tar zxvf wp2_3-bench.tar.gz
```

then:

```
cd wp2_3-bench
```

then:

```
make && make install
```

3.3.1 Server installation only

Make sure MySQL is installed, then as root:

```
mysql -S /tmp/mysql.sock < /opt/cg/share/gridbench/gb_init.sql
```

Copy `/opt/cg/share/java/gridbench.war` to the Tomcat "webapps" directory:

```
cp /opt/cg/share/java/gridbench.war /var/tomcat4/webapps/
```

Restart tomcat:

```
service tomcat4 restart
```

3.4 Configuration

Edit `/opt/cg/etc/gridbench.conf`

1. Set WSHOST to the hostname of the machine hosting the tomcat server.

   ```
   WSHOST=ui001.grid.ucy.ac.cy
   WSPORT=8080
   ```

2. (Server installations only:) Set MYSQLHOST to the hostname hosting the MySQL server. (Leave unchanged for standard installations).

   ```
   MYSQLHOST=localhost
   MYSQLPORT=3306
   ```

3. Host and port of the Information Index (more than one can be defined as indicated)

   ```
   information_index=ii01.lip.pt
   information_index_port=2170

   information_index2=ic.fzk.de
   information_index_port2=2170
   ```

4. Leave the rest unchanged

   ```
   wrapper_path=/opt/cg/share/gridbench/bin/gb_wrapper.sh
   plugins=globus edg
   ```

3.4.1 Other requirements

Certificates

To run the client the user needs to have a valid proxy in the default location. This is generated by

```
grid-proxy-init
```

4 Running and testing

Execute

```
/opt/cg/bin/gridbench-gui.sh
```

(requires X)

If the “Template List” appears empty then make sure the web services are running.

If the “Resource List” appears empty then make sure that the MDS servers specified in the configuration file are reachable.

Drag the “epwhetstone” benchmark from the “Template List” onto a resource from the “Resource List” and click submit. The benchmark should run and you should be presented with the results.

4.1 log files

Currently, logging is done to standard output for the client , and to /var/log/tomcat4/catalina.out for the server.