



OCM-G TEST REPORT

SOFTWARE TEST AND VALIDATION REPORT

WP4 TASK4 - Verification and Quality Control

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Abstract: This report describes the validation performed on the package OCM-G developed by CrossGrid WP 3 task 3.3.1. The tests were performed by Mário David on the behalf of the CrossGrid task 4.4 testbed verification and quality control. OCM-G is a system for on-line application monitoring.



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1. CONTEXT

Test and validation of the package OCM-G version 1.2.4 developed by CrossGrid WP 3 task 3.3.1. OCM-G is a system for on-line application monitoring.

1.1. TEST REQUEST

A properly formatted request test form was sent by e-mail to Mario David (david@lip.pt) on 12 February 2004, through the test and validation web form.

The software URL provided in the “Test Request” was correct, containing the packaged RPMs of the OCM-G tool. Although the request was for testing version 1.2.1, version 1.2.4 has been used due to a later request from the developer.

The manuals or URLs were not correctly provided.

```
Installation manual URL: http://www.eu-crossgrid.org/  
Users manual URL      : http://www.eu-crossgrid.org/  
Development manual URL: http://www.eu-crossgrid.org/  
Soft requirements URL  : http://www.eu-crossgrid.org/  
Soft design URL       : http://www.eu-crossgrid.org/
```

The URLs pointed to the CrossGrid web site, instead of pointing to the correct manuals that are mandatory. Additionally, the URLs for testing/documents are:

```
http://www.eu-crossgrid.org/m6-drafts-login/M24deliverables-  
drafts/CG3.5-D3.5-v1.0-CSIC0-WP3-Integration.doc  
http://www.eu-crossgrid.org/m6-drafts-login/M24deliverables-  
drafts/CG-3.3.1-CYF-D3.5-v0.1-OCM-G.doc
```

These URLs are again incorrect since they point to wrong or missing locations.

The tester had to search for a similar document and obtained: CG3.0-D3.5-v1.0-PSNC010-Proto2Status.doc. This is the deliverable for all WP3 2nd year prototypes. It provides a short User and Installation Manuals with insufficient information for testing purposes and general use.

No document was provided describing the tests to be performed, or what to expect from the current version of the tool.

As result of later e-mail discussions with the developer Bartosz Balis, some more documentation was provided, namely:

```
http://savannah.fzk.de/cgi-  
bin/viewcvs.cgi/crossgrid/crossgrid/wp3/wp3_3-moninfr/wp3_3_1-ocm-  
g/README  
http://www.eu-crossgrid.org/Tutorial/CG3.3.1-TutorialExerciseDescrip-  
tion-v2.0.htm
```

The test requester was Ariel Garcia (garcia@iwr.fzk.de) from FZK and CrossGrid WP4 Iteam on behalf of the developer Bartosz Balis (balis@agh.edu.pl) from AGH Cracow, WP3, task 3.3.1. The test was authorized by Jorge Gomes (jorge@lip.pt) from the WP4 Iteam.

1.2. TEST TEAM

The tests were performed by task 4.4 members from LIP

- Mário David – david@lip.pt

1.3. RESOURCES INVOLVED

The following resources were used in the tests: a User Interface (ui03.lip.pt), two Computing Elements (ce01.lip.pt and ce02.lip.pt). All resources at the LIP-Lisbon site. A second test involved a

CE at SAV, cluster.ui.sav.sk and another at LIP, ce01.lip.pt. The UI was used for the “Service Manager”, for the “Tracer” tool and for job submission of an OCM-G instrumented application. The CE’s are used to run the instrumented application.

2. TEST AND VALIDATION

2.1. SOFTWARE INSTALLATION

The production testbed was used: LCG-1.1.4, which runs RH7.3 installed through a LCFGng server. Additionally one CE (ce02.lip.pt) from the development testbed running EDG-2.1 was also used. In both cases the Globus version is 2.2. Crossgrid is presently distributing Globus 2.4, installing it under /opt/cg, and providing the development packages needed for mpich-g2 usage. The RPMs were added to the following ui03.lip.pt RPM lists:

```
cg-wp3.3-ocmg-1.2.4-1
cg-wp3.3-ocmg-app-devel-1.2.4-1
```

The package cg-wp3.3-ocmg-1.2.4-1 was added to the CE's (ce01.lip.pt, ce02.lip.pt and cluster.ui.sav.sk) RPM lists.

In fact this package is part of the latest RPM list distributed through the FZK CVS repository for the Crossgrid Testbed.

In [1] it is referred that the “development package” should be installed in a UI and that the “run-time package” should be installed in each node where the instrumented application will run. CE's were chosen for this purpose and not the Worker Nodes. The reason is that the tests were performed with mpich-g2 using the fork jobmanager (not PBS), so the application was running in the CE's and not in the WN's.

The installation of the package cg-wp3.3-ocmg-1.2.4-1 was successful. No issues were found with regard to this package. It installs:

```
[root@ui03 root]# rpm -ql cg-wp3.3-ocmg-1.2.4-1
/opt/cg/bin/cg-ocmg-monitor
```

The installation of cg-wp3.3-ocmg-app-devel-1.2.4-1 depends on having mpich-p4 and/or mpich-g2 and Globus development packages installed on the machine. This requirement is mentioned in [1] but the RPM itself does not *require* those dependencies when it is being installed.

The other issue with this package is that when installing it contains a “postinstall trigger script” which triggers the compilation/instrumentation of mpich libraries with OCM-G. Although the instrumented libraries are copied to a correct place (/opt/cg/lib/applib), it is not compliant with a “RPM binary package” distribution. These libraries should be provided with the RPM.

```
/opt/cg/lib/applib/
-rw-r--r-- 1 root root 1654350 Feb 25 17:49 libmpich.a
-rw-r--r-- 1 root root 12000052 Feb 25 17:52 libmpichg2.a
```

Except those two issues the RPMs installs successfully and in the end, all files are in the correct directories with the correct permissions.

The configuration of the tool has to be done manually, although it is quite simple. As mentioned in [3], one has to create the file .ocmg.conf in the user home directory (UI) containing the “Service Manager” host and port variables. A template configuration file should be provided in the RPM. Note: in version 1.2.1, a configuration file was provided: /opt/cg/etc/ocmg.conf, which was removed in the latest (tested) version.

2.2. ADDITIONAL TESTBED MODIFICATIONS

No additional modifications were needed in the testbed machines for the present test.

2.3. TEST DEVELOPMENTS

An example program was used for the tests: crossgrid/wp2/wp2_5-integration/src/gpm_tests/ping.c obtained from the FZK CVS repository. No modifications were made.

An example Globus RSL file was also obtained. This RSL was modified in order to submit with “globusrun” to the two CE’s at LIP, or later to the CE’s at LIP and SAV:

```
+
( &(resourceManagerContact="ce01.lip.pt")
  (count=1)
  (label="subjob 0")
  (environment=(GLOBUS_DUROC_SUBJOB_INDEX 0))
  (executable=$(GLOBUSRUN_GASS_URL) # "ping_ocm")
  (arguments=10 --ocmg-appname app --ocmg-mainism c1885a6b:4e20)
  (stdout=$(GLOBUSRUN_GASS_URL) # output.0)
  (stderr=$(GLOBUSRUN_GASS_URL) # error.0)
)
( &(resourceManagerContact="ce02.lip.pt")
  (count=1)
  (label="subjob 1")
  (environment=(GLOBUS_DUROC_SUBJOB_INDEX 1))
  (executable=$(GLOBUSRUN_GASS_URL) # "ping_ocm")
  (arguments=10 --ocmg-appname app --ocmg-mainism c1885a6b:4e20)
  (stdout=$(GLOBUSRUN_GASS_URL) # output.1)
  (stderr=$(GLOBUSRUN_GASS_URL) # error.1)
)
```

Some environment variables were modified or newly set in order to be able to compile the ping.c application with mpich-g2 instrumented library and Globus 2.4 IO libraries

```
SHLIB_PATH=/opt/cg/globus/lib
SASL_PATH=/opt/cg/globus/lib/sasl:/opt/globus/lib/sasl
GLOBUSBINDIR=/opt/cg/globus/bin
LD_LIBRARY_PATH=/opt/cg/globus/lib:/opt/cg/lib:/usr/local/lib:/opt/edg/lib:/opt/cg/mpichg2/lib
GLOBUS_LOCATION=/opt/cg/globus
CG_LOCATION=/opt/cg
MPICH_CLINKER=/opt/cg/mpichg2/bin/mpich-globus2-cc
PYTHONPATH=/opt/cg/lib
LIBPATH=/opt/cg/globus/lib:/usr/lib:/lib:/opt/cg/mpichg2/lib
GLOBUS_PATH=/opt/cg/globus
MPICH_CC=/opt/cg/mpichg2/bin/mpich-globus2-cc
PATH=/opt/cg/globus/bin:/opt/cg/globus/sbin:/opt/cg/bin:/bin:/usr/bin:/usr/X11R6/bin:/usr/java/j2sdk1.4.1_01/bin:/opt/edg/bin:/opt/edg/sbin:/opt/cg/mpichg2/bin
```

2.4. USABILITY

One should have in mind that the OCM-G tool is a package that is to be integrated and used through the GPM performance-measuring tool developed by WP2 task 2.4.

The tool was considered easy to deploy in the testbed, the installation issues were reported in the previous sections.

From the documentation provided to the testers, it is not easy and clear to understand how to use the tool. No User Manual was provided, making difficult to understand the several command line tools and associated options or arguments. The references [2] and [3] have a short description and usage of some of the command line tools, which are not sufficient for wider deployment.

The tester has followed some of the steps described in the documents [1,2,3,] and found that the tool is not easy to use, because one has to open several terminals and issue “almost at the same time” several command line programs and check the messages sent to these terminals. A more detailed description will be given below. We note again that this tool was not developed to be used in a standalone mode, as has been performed in these tests.

The output values from the Tracer tool and also the one shown in output files produced by the running application, seem to be correct.

The interactive response time seems quite acceptable. The starting of the several command-line tools are fast, as well as the output sent by those tools to the terminals during the execution of an instrumented application.

2.5. FUNCTIONALITY

No document describing the tests to be performed was provided with the test request. The following steps were done:

1. Compilation of a simple mpi application (ping.c) with the OCM-G instrumented mpich-g2 library.
2. Startup of the “Service Manager”.
3. Startup of the Tracer tool.
4. Job submission of the application to the testbed.
5. Check the outputs to the terminals and the output files after job termination.

No flaws were found on the components that were tested. A successful chain of tests (see the steps described above), was achieved after e-mail discussions with the developer.

The compliance with the design and user requirements was not fully verified.

2.5.1. Unit tests

We consider the compilation of the mpich and mpich-g2 libraries with OCM-G, i.e. instrumentations of these libraries as a unit test. This compilation was successful producing the libraries in the correct directory and with correct permissions:

```
[root@ui03 bin]# ./cg-ocmg-mpich-instr
OCM-G is installed at:
/opt/cg
mpicc suggests the following MPI library:
/opt/cg/mpichg2/lib/libmpichg2.a
creating instrumented copy of MPI library
cp /opt/cg/lib/applib/libmpichg2.a /tmp/libOcm.a
.....
[root@ui03 /opt/cg/lib/applib]# ll
total 14892
.....
-rw-r--r--    1 root    root      1654350 Feb 25 17:49 libmpich.a
-rw-r--r--    1 root    root      12000052 Feb 25 17:52 libmpichg2.a
.....
```

Following the instructions described in [2], the tester downloaded “crossgrid/wp2/wp2_5-integration/src/gpm_tests” from the FZK CVS repository, consisting of:

```
-rw-r--r-- 1 david calo 694 Feb 25 18:04 Makefile
-rw-r--r-- 1 david calo 609 Feb 25 18:04 README
-rw-r--r-- 1 david calo 629 Feb 25 18:04 config.h
-rw-r--r-- 1 david calo 26 Feb 25 18:04 machines
-rw-r--r-- 1 david calo 2067 Feb 25 18:04 ping.c
-rw-r--r-- 1 david calo 580 Feb 25 18:04 ping.rsl
-rw-r--r-- 1 david calo 634 Feb 25 18:04 ping_ocr.rsl
-rw-r--r-- 1 david calo 52 Feb 25 18:04 probes.c
```

The “ping.c” program was successfully compiled with the mpich-g2 instrumented library and with Globus 2.4 IO libraries:

```
-rwxr-xr-x 1 david calo 5974975 Feb 25 18:44 ping_ocr
```

For successful compilation some environment variables had to be set or modified in order to point to the Globus 2.4 package distributed by Crossgrid. The list was shown in section 2.3.

The SM is a command-line program. It was successfully started in the User Interface:

```
[david@ui03 david]$ cg-ocr-monitor

Main SM connection string: c1885a6b:4e20
```

The Tracer tool was also started in the User Interface without errors:

```
[david@ui03 david]$ cg-ocr-tracer app --num-procs 2 --terminate --ocr-mainasm
c1885a6b:4e20
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario David
SDDFA
/*
 * "Creation Date" "Fri Feb 27 11:30:21 2004"
 * "Machine" "OCM tracer 1.0"
*/ ;;

#0: "host_add"
{
    int "sec";
    int "usec";
    int "tid";
    char "name"[];
    char "alias"[];
};;

#1: "newtask"
{
    int "sec";
    int "usec";
    int "tid";
    int "ptid";
    int "host";
    char "aout"[];
};;
```

2.5.2. System tests

The system tests correspond to job submission through “globusrun” command to two Computing Elements and checking the output produced by the SM and Tracer tool while the application is running, and also the output files produced when the application terminates.

The first step was copying the application to all machines which will run it:

```
[david@ui03 gpm]$ globus-url-copy file:///home/david/gpm/ping_ocrm
gsiftp://ce02.lip.pt/home/cg001/ping_ocrm
[david@ui03 gpm]$ globus-url-copy file:///home/david/gpm/ping_ocrm
gsiftp://ce01.lip.pt/home/cg010/ping_ocrm
```

The application has to have execute permission set, which is not preserved through “gsiftp”:

```
[david@ui03 gpm]$ globus-job-run ce01 /bin/chmod +x ping_ocrm
[david@ui03 gpm]$ globus-job-run ce02 /bin/chmod +x ping_ocrm
```

The RSL file for the job submission was the one shown in section 2.3, and the job was submitted:

```
[david@ui03 gpm]$ globusrun -s -f ping_ocrm.rsl
```

The screen outputs are shown below. For the SM interface:

```
[david@ui03 david]$ cg-ocmg-monitor

Main SM connection string: c1885a6b:4e20
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario David
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario David
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario David
0 PEER [ rendes ] TYPE STATE 0xMID SOCK/OFF
PID SHMID PROCESS
0 MID RSHPID CONNECTED
0 PEER [ rendes ] TYPE STATE 0xMID SOCK/OFF
PID SHMID PROCESS
0 MID RSHPID CONNECTED
```

The Tracer interface shows:

```
"host_add" { 0, 0, 0, [14] { "ce01.lip.pt" }, [14] { "ce01.lip.pt" } };;
"host_add" { 0, 0, 1, [14] { "ce02.lip.pt" }, [14] { "ce02.lip.pt" } };;
"newtask" { 0, 0, 0, -1, 0, [5] { "data" } };;
"newtask" { 0, 0, 1, -1, 1, [5] { "data" } };;

#2: "MPI_Barrier-START"
{
    int "sec";
    int "usec";
    int "process";
};;

"MPI_Barrier-START" { 1077881561, 17640, 0 };;
"MPI_Barrier-START" { 1077881561, 62176, 1 };;

#3: "MPI_Barrier-END"
{
    int "sec";
    int "usec";
    int "process";
    int "result";
};;

.....
"MPI_Ssend-END" { 1077881561, 767652, 0, 0 };;
"MPI_Recv-START" { 1077881561, 767662, 0, 1, 0 };;
"MPI_Ssend-START" { 1077881562, 71366, 1, 0, 0, 100 };;
"MPI_Ssend-END" { 1077881562, 71769, 1, 0 };;
"MPI_Barrier-START" { 1077881562, 71785, 1 };;
"MPI_Barrier-END" { 1077881562, 72109, 1, 0 };;
"MPI_Recv-START" { 1077881562, 72123, 1, 0, 0 };;
"MPI_Recv-END" { 1077881562, 72171, 0, 0, 100 };;
"MPI_Barrier-START" { 1077881562, 72274, 0 };;

.....
```

The output file corresponding to ce01.lip.pt, "outputfile.0" contains the following:

```
5678: Program Started
MPI initialized
Creating /tmp/.ocmglock_6010
*** Starting new LM...
LM is starting...
App. Proc: reg.message:app ce01.lip.pt /
home/cg010/.globus/.gass_cache/local/md5/13/3965dc78d2fce093cf6309cf0bb5bd/md
5/6e/691eeded7667d2bleae
be322c4b13b/data 5678 0 136432916 1
Registration successful
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario David
0 PEER [ rendes ] TYPE STATE 0xMID SOCK/OFF
PID SHMID PROCESS
[ic] fifo fd: 10
*** Process 0 (pid 5678) of application 'app' registered at 'ce01.lip.pt'!***
unlink(/tmp/.ocmglock_6010)
OCMG registered
Hello from 0 of 2
0: Send_volume = 948 B/s
0: Recv_volume = 95 B/s
0: Revc_delay = 28.876 %
.....
0: Send_volume = 1000 B/s
0: Recv_volume = 100 B/s
0: Revc_delay = 29.482 %
*** unlink(/tmp/ocmg_6010)
```

The output file corresponding to ce02.lip.pt, "outputfile.1" contains the following:

```
14952: Program Started
MPI initialized
Creating /tmp/.ocmglock_6001
*** Starting new LM...
LM is starting...
App. Proc: reg.message:app ce02.lip.pt /
home/cg001/.globus/.gass_cache/local/md5/f7/d1e99424e27563c639775316e396d
2/md5/6e/691eeded7667d2bleae
be322c4b13b/data 14952 1 136432916 1
Registration successful
authorization callback: peer identity: /C=PT/O=LIP/OU=Lisbon/CN=Mario
David
0 PEER [ rendes ] TYPE STATE 0xMID SOCK/OFF
PID SHMID PROCESS
[ic] fifo fd: 10
*** Process 1 (pid 14952) of application 'app' registered at
'ce02.lip.pt'!*** unlink(/tmp/.ocmglock_6001)
OCMG registered
Hello from 1 of 2
*** unlink(/tmp/ocmg_6001)
```

In the second test, the chain was also successfully tested with one CE at LIP (ce01.lip.pt) and one CE at SAV (cluster.ui.sav.sk):

```
"host_add" (0,0,0,[20] {"cluster.ui.sav.sk"}, [20] {"cluster.ui.sav.sk"});;  
"host_add" { 0, 0, 1, [14] { "ce01.lip.pt" }, [14] {"ce01.lip.pt"}};;  
"newtask" { 0, 0, 1, -1, 0, [5] { "data" } };;  
"newtask" { 0, 0, 0, -1, 1, [5] { "data" } };;
```

In either tests, the “cg-ocmg-monitor” and the “cg-ocmg-tracer” terminate after the application has finished running.

2.5.3. Stress tests

The stress tests would involve a larger number (>2) CE’s for the application to run. This was not performed since the application ping.c is limited to 2 processes.

2.6. COMPATIBILITY

The software is compatible with the other components of the middleware installed in the “production” testbed. The packages on which the OCM-G depends are distributed by Crossgrid, see section 2.1 for more details.

There is no software backwards compatibility issues, since this is the first version of the tool to be tested.

2.7. SECURITY AND NETWORKING

The “Service Manager” (SM) tool uses a “configurable port” for the communications with the “Local Managers” (LM’s). The default port 3331 was used in the tests, although the hexadecimal *host:port* shown in the SM the port does not correspond to the one which was configured, in the tests the port shown in the Main SM connection string was **4e20** corresponding to 20000, and changing the port in the .ocmg.conf configuration file does not change it. For general use of the tool, the port number of the SM has to be open in the firewalls because of communications between the machine where the SM runs and all the nodes running the instrumented application (LM’s) The issue of port numbers or range has yet to be agreed within the Crossgrid team, and advertised to the developers of the other WP’s.

As far as we know, the libraries on which the OCM-G tool depends don’t have any security issues.

The SM tool has to be run from a user account in the UI with a previously created proxy, since the communications are performed through the Globus IO libraries including GSS security.

No security issues were found.

2.8. PREVIOUSLY REPORTED ISSUES

This was the first version to be tested.

3. ISSUES FOUND

3.1. ISSUES FOUND IN THE SOFTWARE

3.1.1. Issue 001

(Severity: high Priority: high)

The package cg-wp3.3-ocmg-app-devel-1.2.4-1 should require the following RPMs to be installed:

cg-wp4-mpichg2-1.2.5-1

cg-wp4-mpich-1.2.5-1

cg-wp4-globus-2.4.2-1

Since it depends on these packages to work properly.

3.1.2. Issue 002

(Severity: high Priority: high)

The package cg-wp3.3-ocmg-app-devel-1.2.4-1 should not trigger the postinstall compilation script to compile/instrument the mpich libraries. The libraries should be provided already instrumented within the RPM.

3.1.3. Issue 003

(Severity: medium Priority: medium)

Port number of the Service Manager does not seem to be configurable.

Although it is mentioned in the documentation [3] that the port number for the SM should be configured in .ocmg.conf file which should be created in the user home directory on the UI, it is apparently ignored. At the SM startup:

```
[david@ui03 david]$ cg-ocmg-monitor  
  
Main SM connection string: c1885a6b:4e20
```

The “string” corresponds to the “*host:port*” in hexadecimal. In fact “c1885a6b” is “193.136.90.107” the ui03.lip.pt IP, but the port “4e20” corresponds to 20000, when port 3331 had been configured. Furthermore, in the test made at a later date and without any change of the configuration file, the port shown in that string was 4e21 corresponding to 20001.

Some action should be taken to understand/explain this behaviour.

3.1.4. Issue 004

(Severity: medium Priority: medium)

A template configuration file ocmg.conf.template should be provided within the RPM and properly commented.

3.1.5. Issue 005

(Severity: low Priority: low)

The present compilation of OCM-G package is done with gcc 2.95-2. Foreseen evolution of the test-bed to LCG2 is to have only gcc 3.2. Although gcc 2.95-2 can be maintained, it is advisable to change to the new gcc version.

3.2. ISSUES FOUND IN THE DOCUMENTATION

3.2.1. Issue 001

(Severity: high Priority: high)

The documentation available for the usage of the OCM-G tool is very sparse, not very clear and in some cases old.

No installation manual was made available, the documents referred in this test report are not always clear on which elements of the testbed one should deploy/install the packages.

The RPM's don't contain any "man pages" or any other kind of documents. This makes very difficult to know what parameters and options the several command-line tools accept, and its usage.

The command-line tools: cg-ocmg-tool, cg-ocmg-tracer don't have a "-h, -help" option showing its usage and arguments.

No "User Manual" was provided. The tutorial [3] is very incomplete regarding the tests that can/should be performed, lacking again the full usage of the tools. There is no documentation on how to instrument a given application with OCM-G.

The lack of documentation and also of an example program did not make possible to perform further tests.

4. RECOMMENDATION

Our first recommendation is for the developers to provide good documentation, issue 3.2.1.

The package `cg-wp3.3-ocmg-app-devel-1.2.4-1` should require the following RPMs to be installed:

`cg-wp4-mpichg2-1.2.5-1`

`cg-wp4-mpich-1.2.5-1`

`cg-wp4-globus-2.4.2-1`

It should not trigger the postinstall compilation script to compile/instrument the mpich libraries. Those instrumented libraries should be provided already within the RPM.

A template configuration file should be provided within the RPM properly commented. Suggestion:

```
/opt/cg/etc/ocmg.conf.template
Containing
# SiteSMHost is the host running the Service Manager
# SiteSMPort is the port number
SiteSMHost = host.mydomain
SiteSMPort = 3331
```

Present compilation of the tool with gcc 2.95-2. Foreseen evolution of the testbed to LCG2 is to have only gcc 3.2. Although gcc2.95-2 can be maintained, it is advisable to change to the new gcc version.

Recommendation for the Crossgrid ITEAM is to deploy the package `cg-wp3.3-ocmg-1.2.4-1` in the testbed in the Computing Elements and Worker Nodes.

5. REFERENCES

- [1] <http://www.eu-crossgrid.org/m6-drafts-login/M24deliverables-drafts/CG3.0-D3.5-v1.0-PSNC010-Proto2Status.doc>
- [2] http://savannah.fzk.de/cgi-bin/viewcvs.cgi/crossgrid/crossgrid/wp3/wp3_3-moninfr/wp3_3_1-ocm-g/README
- [3] <http://www.eu-crossgrid.org/Tutorial/CG3.3.1-TutorialExerciseDescription-v2.0.htm>

6. INTEGRATION/VALIDATION REQUEST

Message sent by: on:

Request id : 107659095358.6653977007703
Request date : 12/Feb/2004

Component name : OCM-G
Component version: 1.2.1
Request priority : 2

Requester name : Ariel Garcia
Requester wp : 4
Requester task : Iteam
Requester phone : (+49) 7247 82 8608
Requester fax : (+49) 7247 82 4972
Requester partner: FZK
Requester email : garcia@iwr.fzk.de

Developer name : Bartosz Balis
Developer project: eu-crossgrid
Developer wp : 3
Developer task : 3.3.1
Developer phone : -
Developer fax : -
Developer partner: AGH Cracow
Developer email : balis@agh.edu.pl

Software URL :
<http://gridportal.fzk.de/distribution/crossgrid/releases/allfiles/7.3/cg/wp3/>

Test URL : <http://www.eu-crossgrid.org/>
Installation manual URL: <http://www.eu-crossgrid.org/>
Users manual URL : <http://www.eu-crossgrid.org/>
Development manual URL : <http://www.eu-crossgrid.org/>
Soft requirements URL : <http://www.eu-crossgrid.org/>
Soft design URL : <http://www.eu-crossgrid.org/>

Component description : OCM-G is a system for on-line application monitoring.

Component dependencies : LCG1/EDG2 middleware
Features to test : All :-)

Features not to test : Any bugs... ;-)

Other considerations : T&V request to keep things rolling ;-)

The URLs for testing/docu are:

<http://www.eu-crossgrid.org/m6-drafts-login/M24deliverables-drafts/CG3.5-D3.5-v1.0-CSIC0-WP3-Integration.doc>

<http://www.eu-crossgrid.org/m6-drafts-login/M24deliverables-drafts/CG-3.3.1-CYF-D3.5-v0.1-OCM-G.doc>