Testing EDG 1.2

Status report

Test Group Sites

- TSTG
  - IN2P3/LPC
  - CPPM/CNRS + CS-SI
  - CEA/Saclay
  - IFAE
- Also collaborating
  - INFN EDG Testing Group
  - LIP (Crossgrid test/validation coordination)

Test Group Activity: Status

- Download and install RPMs
  - Scripts to automate the installation of a non-LCFG node from a rpm list
- Installation & Configuration tests
  - Script to check if CRLs are installed in a node and are not out-of-date
  - Script to query the MDS to check GIIS/GRIS information published
- Middleware functionality tests
  - MyProxy: Scripts to test some MyProxy services from a MyProxy client
  - Job Cycle (RB,JSS,LB…): Given a .jdl, scripts to automate the job submission cycle:
    - job submit -> job status (loop until OutputReady) -> job get output
  - Data Management (GDMP & RM): Scripts to automate a file replication cycle among 2 Ses.
    - subscribe SE-A to SE-B -> GridFTP file to SE-A -> register & publish at SE-A -> replicate file from SE-A to SE-B -> delete file from SE-A and SE-B

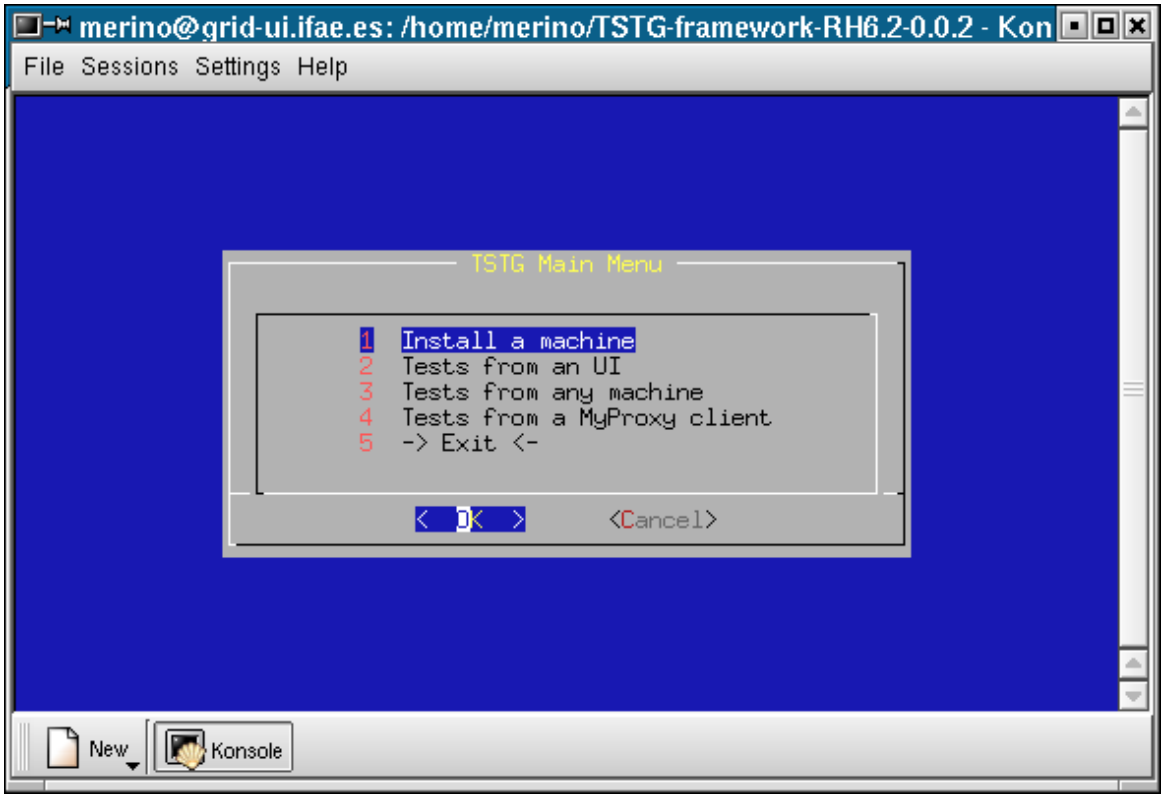
Test Group Activity: Status

- All the test scripts written by the Test Group are made available in the web at:
  `http://marianne.in2p3.fr/datagrid/TestPlan/Tools/index.html`

- ~Beginning of July:

  All scripts are collected and put together.

  1st prototype of testsuite available from Test Group web page



INFN EDG Testing Group

- There is a testing group at INFN coordinated by Flavia and formed by ~7 (part-time) members.
- This group showed interest in trying to coordinate its activity with the EDG Test Group.
- They have defined a list of tests to be done on each grid element and are producing a test suite based on shell scripts.

Global checks

- existence of mandatory files, users
- running services
- params in globus.conf, info-mds.conf
- env variables
- GRIS/GIIS ldapquery check
- …

All the code produced is kept under conf. control in a CVS repository

CE specific checks

- Check of CE Info provider static files
- Globus-job-run with fork & PBS
- PBS configuration
- …

SE specific checks

- Check of SE Info provider static files
- GDMP: .conf files, functionality…
- …

UI, WN, RB… specific checks

GDMP testing

- During July, most of the testing activity focused on testing GDMP
- Some TSTG SEs were configured (edg_beta9) to make these tests:
  - LIP - lngrid03.lip.pt
  - IFAE – grid-s1.ifae.es
  - CPPM - dg1-cppm.datagrid.cnrs.fr
  - CNAF - testbed007.cnaf.infn.it
- The testing helped to discover some conf. problems, essentially:
  - Missing user/host certificates in grid-mapfiles
  - Wrong RC configuration at gdmp.private.conf
- Once those were corrected, simple replication tests were done without problem

GDMP testing

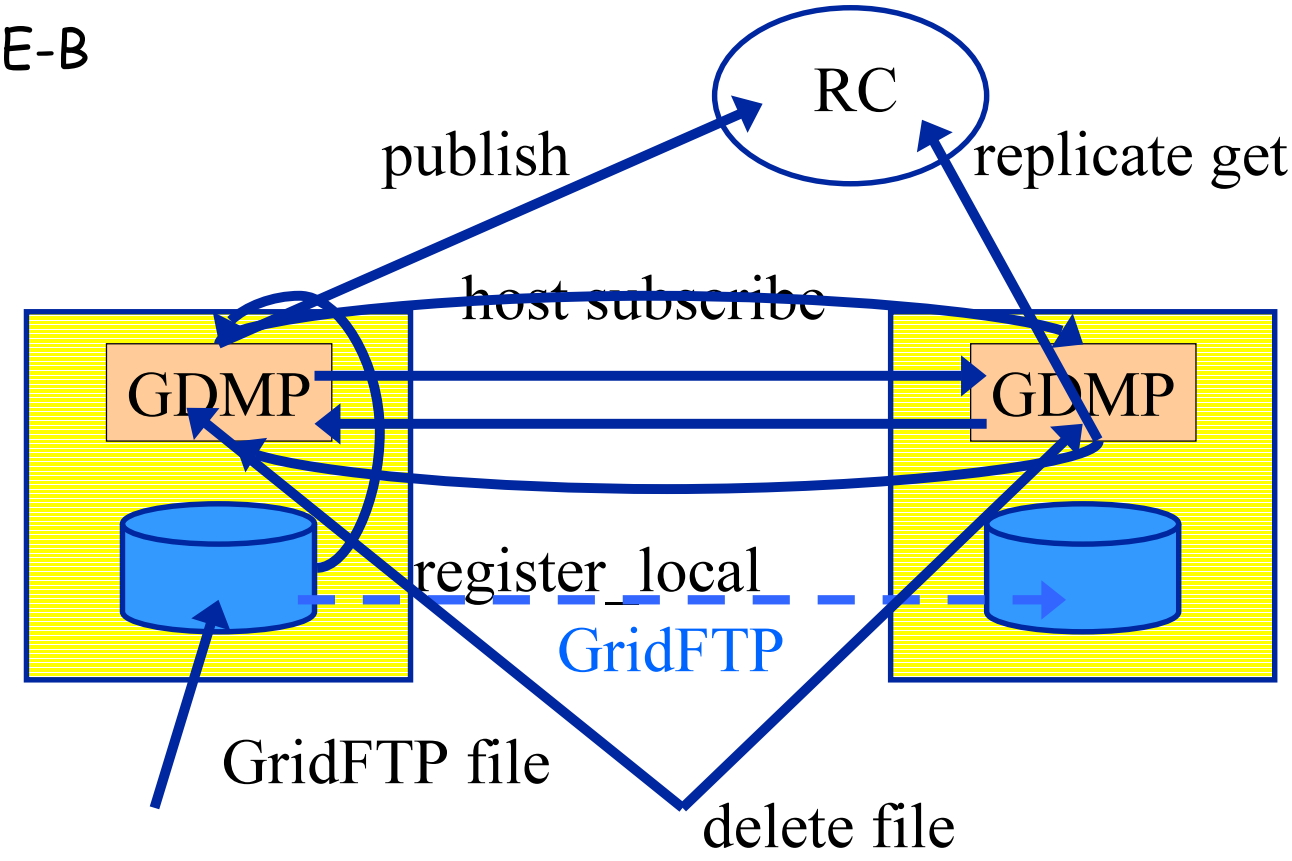
- The script used to do these tests was made available on the Test Group web page and sent to the Iteam mailing list:

- "inter-subscribe" SE-A and SE-B

- check one way:
  -gridFTP file to SE-A
  -register and publish at SE-A
  -replicate file SE-A -> SE-B

- check the other way
  -gridFTP file to SE-B
  -register and publish at SE-B
  -replicate file SE-B -> SE-A

- delete both files



Some tests performed at IFAE

- Run an "array" of tests on TSTG and Development TB
  - Development TB (Atlas VO)
- Similar tests using the Replica Manager still under development:
  - *edg-replica-manager-copyAndRegisterFile*
  - *edg-replica-manager-replicateFile*
  - *edg-replica-manager-deleteFile*
  - *edg_rc_deleteLogicalFileName (!)*
- Automatic tests under preparation. Some problems found with return values from RM commands.

GDMP testing

- Most common errors due configuration issues:
  - Out-dated grid-mapfile / missing site certificates:

```
Server Error [XXX.XXX.XXX]: Can't find user with
  CN="/C=YYY/O=YYY/OU=host/L=YYY/CN=YYY.YYY.YYY" in grid-mapfile
  "/opt/edg/etc/atlas/grid-mapfile" [ Thu Aug 29 20:26:33 2002 ]
  Error: the connection to host XXX.XXX.XXX:2000 cannot be established/authorized !
```

  - Replica Catalogue settings:

```
Server Error [XXX.XXX.XXX:2000]: Published to remote hosts but RC not updated due to
  error in updating replica catalogue [ Thu Aug 29 20:31:43 2002 ]

Server Error [XXX.XXX.XXX:2000]: Deleting in Replica Catalogue failed.
```

  - MDS GRIS service on the SE not working:

```
ldap_bind: Can't contact LDAP server
```

  - Other:
    - `error: [globus_ftp_client] FTP server: 530 No local mapping for Globus ID`
    - `Warning: GDMP_STORAGE_DIR is not set in gdmp.conf file.`

GDMP testing

- Some other errors still to be understood:

  - *gdmp_replicate_put:*

Sometimes, after the message "1 replica found for..." and before issuing the message "file XXX successfully transferred":

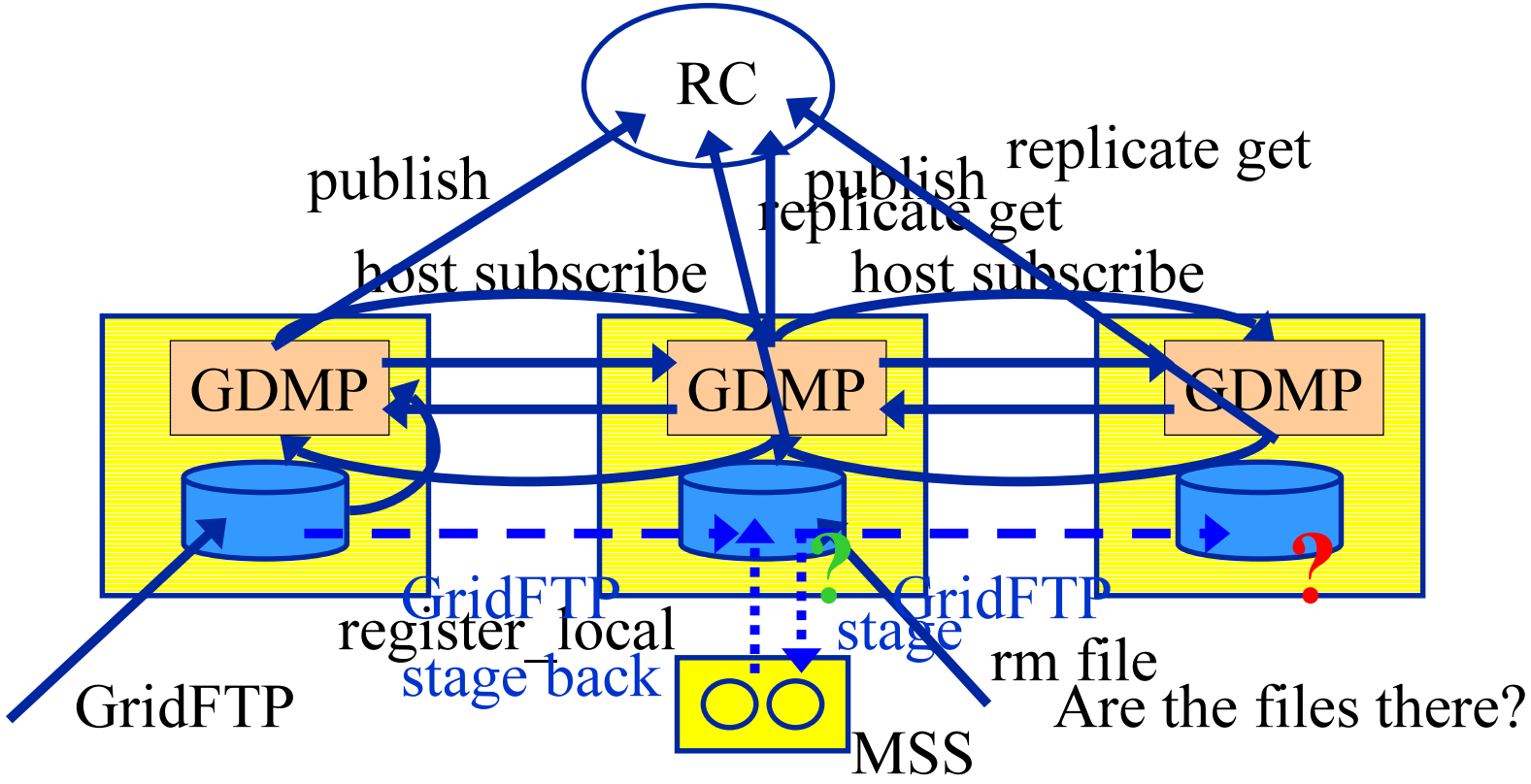
- It gets stuck with:

```
.ls: /afs: No such file or directory
```

- Issues the error:
- `GDMP_DataMover::get(): Error: Disk space left on "/flatfiles/06/wpsix" device is not enough for file "/flatfiles/SE1/wpsix/dummy_file.020829203202" of size 262144 [ Thu Aug 29 19:58:55 2002 ]`

GDMP-MSS

- Some more complex replication patterns have been tested by EDG people: script sent by S.Burke to the ITeam mailing list:



Summary

- Some test scripts have been produced by the Test Group. Test suite available from the web page in marianne.
- Focus on testing GDMP in July:
  - TSTG
  - INFN-TSTG
  - LIP – Coordinators of Crossgrid test/validation group
  - Testing helped to find some configuration problems.
  - No big problems found in GDMP functionality for the simple file replication test case performed.
- Scripts produced by other EDG people should be collected and integrated in the test suite.
  - Ex/ S.Burke GDMP+MSS script – Shows a problem in GDMP functionality:
    - If a file is replicated from site A where it isn't on the disk, but in MSS, it should be still moved from MSS to disk and then moved to the other site.

Conclusions and future

- From our experience, lots of problems come from wrong configuration
  - **LCFG** helps on this, but…
    - Some people think configuring an LCFG server from scratch is too heavy (~1week)
      - Writing some sort of LCFG Server installation HOWTO with a clear step-by-step procedure could help
    - Even on LCFG installed nodes, some configuration problems can arise…
      - Issue of SE host certificates on GDMP VO-specific grid-mapfiles

Conclusions and future

- Objectives of the Test Group
  - Testing –
    - After a new piece of m/w has been released: Automatic way to verify that the whole EDG m/w functionality works.
  - Validation –
    - For new sites: Provide test suite to automatically check if the installation & configuration are Ok.
- Focus of Test Group must be on producing and maintaining a test suite to automate tests.
- Several people contribute => need to adopt some methodology
  - Clear, exhaustive… definition (a priori) of features to be tested
  - Keep the produced code under configuration control

Conclusions and future

- Validation –
  - We must go towards being able to perform a fully automatic installation, configuration and testing of any new Grid node.

- EDG, LCG and Crossgrid testbeds will have lots of commonalities:
  - A coordinated effort is needed for their test and validation activities.
  - EDG/LCG/XG Test and Validation task force?