



First attempt for validating/testing Testbed 1 Gbus and middleware services

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Outline

- ◆ Common installation platform :
 - SE, CE, WN, UI list of RPMs (basic for a site to join)
 - Manual and automatic (via W P4 tools) configuration
 - ◆ The Resource Broker, Logging & Bookkeeping, Information Index
 - Special cases. Only few needed. Installation instructions are coming. Good support from W P1
 - ◆ Creating a test suite to avoid most common problems. It can be used to verify an installation before joining testbed
 - SE test suite (under testing)
 - CE test suite (few additional missing)
 - WN and UI test suite (only basic functionalities are tested. Almost ready)
 - ◆ Wide deployment
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Common Installation Platform (1)

◆ Installation of an SE :

- For what concerns Globus2 :
 - GRIS
 - gsincftpd
 - The SE information providers implemented by W P5 /W P3
 - The GDM P server and client libraries by W P2
 - In /etc/grid-security all the RPM s concerning the "trusted" EDG CA s should be installed.
 - A proper grid-mapfile needs to exist to allow for GDM P transfers.
 - GDM P needs to be properly configured
 - Optionally a gatekeeper for issuing gdm p commands remotely
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Common Installation Platform (2)

◆ Installation of a CE :

- For what concerns Globus2 :
 - GRAM
 - GRIS
 - The CE information providers implemented by W P4 /W P3
 - The local logger services (provided by W P1)
 - Since a running job can update the Replica Catalog (RC) with new "produced" data (by the job), it is necessary to install the RC API (provided by W P2)
 - Since a running job can query info about the close SEs, then, it is necessary to install the GDM P BrokerInfo API provided by W P2
 - Grid-mapfile and /etc/grid-security/certificates in place
 - A LRM S (Local Resource Management System) must be installed and properly configured (only PBS and LSF are supported) from sys-admin
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Common Installation Platform (3)

◆ Installation of a W N :

- For what concerns Globus2 :
 - gridftp client
- Since a running job can update the Replica Catalog (RC) with new data "produced" by the job, it is necessary to install the RC API (provided by W P2)
- Since a running job can query info about the close SEs, then, it is necessary to install the GDM P BrokerInfo API provided by W P2
- /etc/grid-security/certificates in place
- A LRM S client must be installed and properly configured (only PBS and LSF are supported) from sys-admin



Common Installation Platform (4)

◆ Installation of a UI:

- For what concerns Globus2:
 - services required by the user (eventually none)
- UserInterface as provided by W P1
- User accounts and certificates
- /etc/grid-security/ in place

- VERY LIGHT INSTALLATION





Installation and Configuration via LCFG

- ◆ The deployment of testbed sites, requires a common installation and configuration tool. A LCFG working group has been created to:
 - “integrate” all software needed (OS, Globus, Web Services middleware, Applications)
 - test the RPM compatibility/dependencies and the full installation procedure
 - prepare a “LCFG toolkit” for automatic installation and configuration of testbed machines (SE, CE, WN, UI)
 - provide documentation and help for farm administrators
 - to install quickly a new machine
 - also for users management, NFS, ...



LCFG kit summary

- ◆ "LCFG toolkit" for automatic installation and configuration of testbed machines:
 - RPM lists (ComputingElement h , StorageElement h , ...)
 - set of configuration/templates files
 - ◆ LCFG Globus object for configuration of Globus components
 - different actions for CE , SE , UI
 - ◆ Web page with software and installation guide:
 - www.infn.it/datagrid/wp4-install
 - [moving to the official documentation site](#)
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Test suite

- ◆ We put together a test suite per machine type to avoid most frequent errors:
 - Configuration problems for the various machine types (missing rpm s)
 - Miss-configured grid-mapfiles (CE ,SE ,UI)
 - CRLs expired or /etc/grid-security/certificates not correct. (CE ,W N ,SE ,UI)
 - home directories not exported/mounted via NFS (between CE and W N s)
 - GRIS not answering correctly/Information Providers not correctly configured. (CE ,SE)
 - Main Globus commands (CE)
 - gsincftp (SE ,CE ,W N)
 - GDM P commands (SE)
 - Replica Catalogue/BrokerInfo operations. (SE ,CE ,W N)
 - W P1 UI commands/configuration (UI)
- ◆ Still under development ... for the moving target



Wide deployment

- ◆ To verify that what we produced was useful:
 - LCFG installation and the developed configuration objects successfully tested (alpha15+ ■ ... beta21 ??).
 - Some sites already tried out the produced templates and the instructions
 - The work done has been a very good starting point to test a farm -installation procedure to join testbed1, and useful tools have been produced
- ◆ The tools are ready to start a wide deployment of the testbed1 farms.





Conclusions

- ◆ The machine types defined seem to be OK
- ◆ Lists/Templates produced are valid and LCFG objects make (~)automatic the process of setting up a site
 - (with a 100M b/s network ~10 min to install a node)
- ◆ The testing suite is a good starting point for a validation process. A more comprehensive test is needed, but preconfigured testing "services" need to be in place
- ◆ The process of registering a site which has passed the validation tests can be made more automatic
- ◆ The tools are ready to start a wide deployment of the testbed1 farms.