Testbed status

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Information Society and Media

Outline

- **Content**
  - Current testbed
  - Next steps
  - Relationships with EuChinaGRID

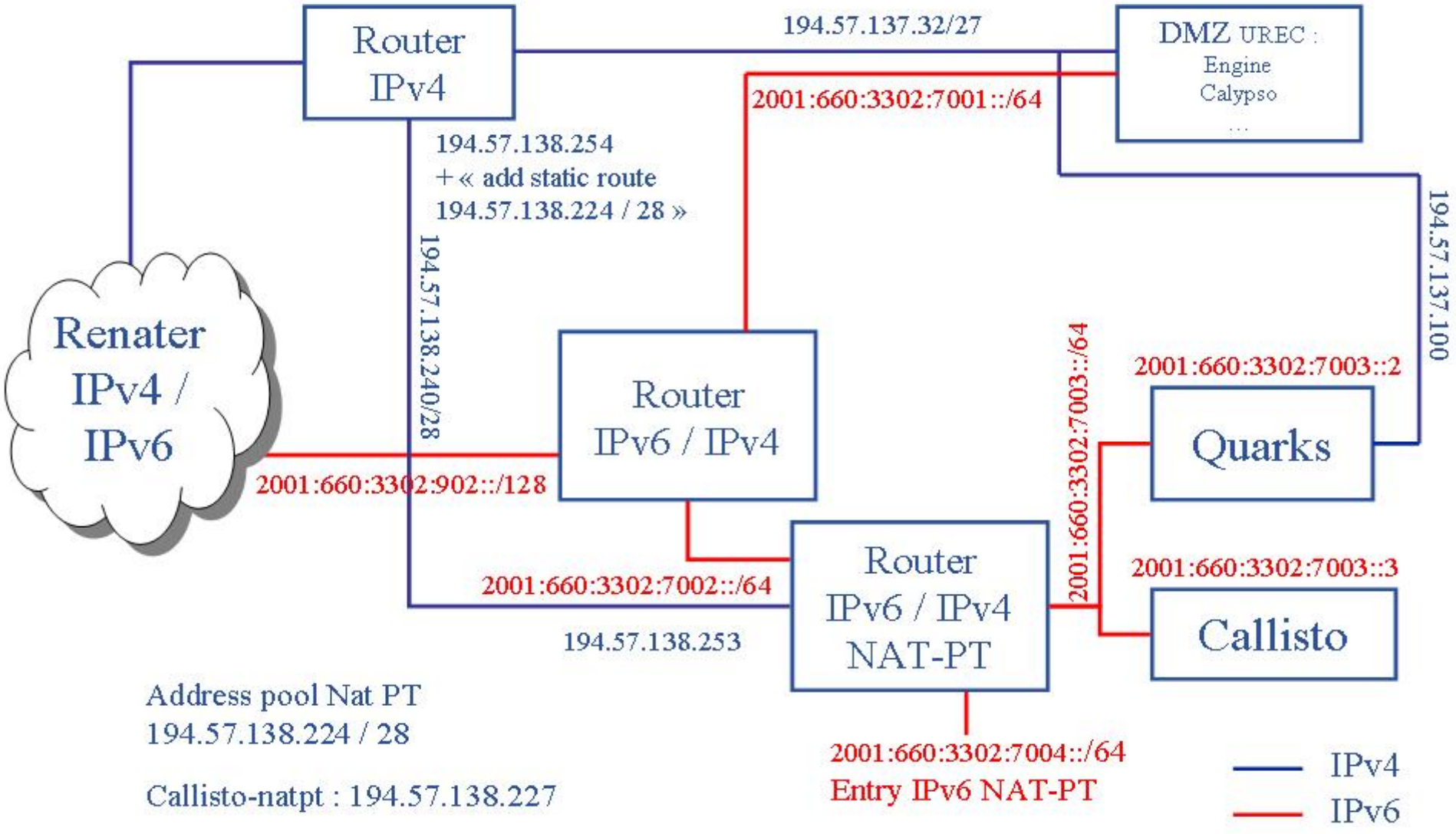
Current EGEE SA2 IPv6 glite testbed

- **2 sites : UREC, GARR**
  - **UREC**
    - 2 nodes
    - BD-II Top Level
    - IP : NAT-PT / dual stack / IPv6 only / IPv4 only
  - **GARR**
    - 10 nodes (VMware, 9 SCL 3.0.8, 1 SLC 4.0.4)
    - UI,WMS,LB,CE,WN, RGMA, BDII, SE, VOMS
    - IP: dual stack / IPv6 only / IPv4 only
- **All main GRID m/w branches already:**
  - Security AAA components modules (VOMS)
  - Workload Managements modules (WMS, LB, CE, WN, Torque, UI)
  - Information System modules (BD-II, RGMA)
  - Data Management modules (Classic SE)

UREC site

- **UREC**
  - Includes the NAT-PT router for IP protocol translation
    - IPv6 clients can connect IPv4 servers and vice versa
      - *To validate the proposed testing methodology*
  - Currently deploying a gLite top-level BD-II
  - Possibly new nodes will be added (CE, WN..)

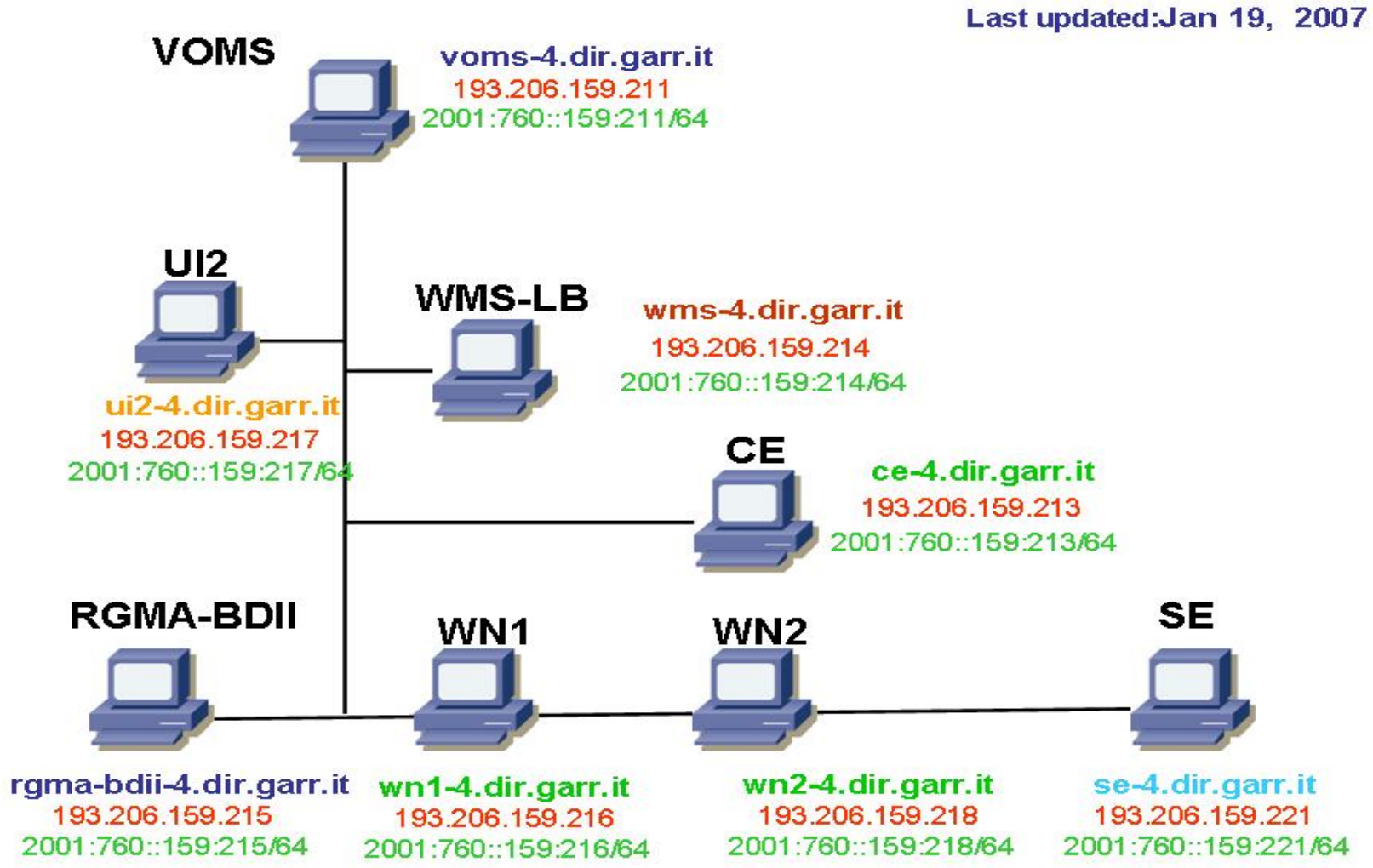
UREC Testbed



GARR site

- **GARR**
  - Based on Virtual Nodes VMWare
    - easy to maintain, update, backup, migrate nodes
    - Managed from a central node(via SSH key) through scripts for
      - *installing gLite on the nodes (altern. to manual local install on the node)*
      - *pushing gLite updates via APT*
      - *IPv management / network configuration (netproto-switcher.sh)*
  - All nodes have double IP address (IPv4 and IPv6) and are registered on the dual stack DNS server
  - Daily job execution managed for monitoring behavior and stability via an automatic tool
      - *Sends a test job every night to the available CEs (1!)*
      - *Polls for the job status and tries finally the output retieval*
      - *Reports the results on a DB*
      - *This DB is interfaced to the Web for users/sysadmins*

GARR site


Last updated:Jan 19, 2007
VOMS
voms-4.dir.garr.it
193.206.159.211
2001:760::159:211/64
UI2
ui2-4.dir.garr.it
193.206.159.217
2001:760::159:217/64
WMS-LB
wms-4.dir.garr.it
193.206.159.214
2001:760::159:214/64
CE
ce-4.dir.garr.it
193.206.159.213
2001:760::159:213/64
RGMA-BDII
rgma-bdii-4.dir.garr.it
193.206.159.215
2001:760::159:215/64
WN1
wn1-4.dir.garr.it
193.206.159.216
2001:760::159:216/64
WN2
wn2-4.dir.garr.it
193.206.159.218
2001:760::159:218/64
SE
se-4.dir.garr.it
193.206.159.221
2001:760::159:221/64

+ Home
+ Today test
+ Old test

GRID monitoring of the EGEE SA2 IPv6 testbed using daily cron jobs

This website is a web interface to EGEE SA2 IPv6 Testbed Database, containing information about the status of the several Computing Elements (CEs) and Storage Element (SEs) available on EGEE SA2 IPv6 Testbed.
This automatic tool is a cron jobs set, which automatically (with this schema), every night at 1.00 am, runs a test job on each CE and SE and updates a dedicated database with the result. The website has been designed as a web interface to this database. The database data are organized in rows as follows

CE Name	Log file	Data	WMS Status	CE in WMS	Close SE	run info					storage info		
						Scheduled	Running	Done	Output Ready	Aborted	CloseSE	OtherSE	LFC

Meaning of the table fields:

- **CE Name** - CE name (as provided by the WMS Server)
- **Log file** - The log file of the job **(to be implemented)**
- **Date** - Test date
- **WMS status** - Status of the WMS Server when it is tested
- **CE in WMS** - The CE is not listed in the WMSs
- **Close SE** - The Close SE and the Mounting Point are defined

- **Scheduled** - The value of this field is OK if the CE correctly schedules the job submitted
- **Running** - The value of this field is OK if the CE correctly run the job submitted
- **Done** - The value of this field is OK if the CE correctly terminate the job submitted
- **Output Ready** - The value of this field is OK if the CE creates the output file(s) corresponding the job submitted
- **Aborted** - The job submitted is aborted

- **CloseSE** - The job's output is correctly copied in the close storage element of CE (using comman globus-url-copy)
- **OtherSE** - The job's output have been tranferred from the close storage element of CE in an other storage element **(to be implemented)**
- **LFC** - The value of this field is OK if the job's output have been registred in Replica Catalogue **(to be implemented)**

+ Home
+ Today test
+ Old test

154 Visits

CE Name	Log file	Data	WMS Status	CE in WMS	Close SE	run info					storage info		
						Scheduled	Running	Done	Output Ready	Aborted	CloseSE	OtherSE	LFC
ce-ipv6.dir.garr.it/blah-pbs-short		2007-01-19			NO	OK	OK	OK	NO	AB	NO		
quark.urec.cnrs.fr-TEST		2007-01-21			NO	NO	NO	NO	NO	AB	NO		
ce-4.dir.garr.it/blah-pbs-short		2007-01-22			OK	OK	OK	OK	OK	OK	NO		
ce-4.dir.garr.it/blah-pbs-short		2007-01-24			OK	OK	OK	OK	OK	NO	NO		
ce-4.dir.garr.it/blah-pbs-short		2007-01-24			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-25			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-26			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-28			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-28			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-29			OK	OK	OK	OK	OK	NO	OK		
ce-4.dir.garr.it/blah-pbs-short		2007-01-30			OK	OK	OK	OK	OK	NO	OK		

Next Steps

- **We should try to include further missing modules**
  - Data Management ones
    - FTS server [Oracle….]
    - LFC File Catalog
    - DPM-based SRM Storage Element
  - Workload Management ones
    - myProxy (PX) server
    - LSF CE
- **Expand the UREC site**
  - Possibly installing a CE and a WN to test Job Submission on the WAN on more than 1 site
- **Include other sites ?**
  - Share workload / Test on the WAN / see WAN effects

Next Steps

- **Further develop the testbed management scripts**
  - make them as flexible and as general as possible
    - Place all site-specifc parameters in a config-file

- **Create a Reference web site/wiki for the collaboration with all information on**
  - Testbed sites and nodes
  - Configuration files
  - Network / IP settings

- **Eventually install reference applications ?**
- **Analysis of the advantages of IPv6 w.r.t. the GRID m/w in general**
  - to go a step higher on the stack
    - IPv6 enabled
      - *Further validate the IPv6 compliance of the m/w*
      - *Start seeing IPv6 features - available for the application on top of the m/w stack*

Next Steps

- **put somewhere a common CVS server**
  - Asked for a CERN-based one (1 month ago). No news about it.

- **Include sites (other CEs) in the CronJob GRID monitoring**

Relations to EuChinaGRID

- **Collaboration with EUChinaGRID on different items:**
  - IPv6 compliance test of the gLite middleware
    - It is of course a major item for EUChinaGRID
    - Whatever is set up and working to test it from the EGEE side is of interest for EUChinaGRID. And vice versa. (Common Issue)
      - *Methodology*
      - *Network Monitoring Tools (smokeping, MRTG, IPERF…) on the testbed*
      - *Testbed Administration / Newtork Administrations tools*
      - *Monitoring of the Performances / Results*
  - Share sites in the testbed (totally or partially)
    - Start a possible collaboration with INFN Roma Tre / NAT-PT