

EGI Network Support – IPv6 Video Conference - Friday 13, 2012 – 2:30 PM VCONF

Participants (8):

Dave Kelsey UK HEPiX IPv6 WG – NGI_UK UK

Jiri Sitera METACENTRUM ZCU , Tomas Kouba FZU NGI_CZ CZ

Alessandro Usai, Simon Leinen, Joel Casutt - SWITCH NGI_CH CH

Mario Reale GARR NGI_IT IT

Bruno Hoeft KIT NGI_DE

Agenda

1. Opening : clarification on our goals
2. Short report from HEPiX IPv6 (David)
3. Which sites/NGIs are available to offer resources
4. Where to install relevant common services
5. How to organize testing and reporting
6. How to collaborate with HEPiX IPv6 working group and EGI-Inspire JRA1
7. How to organize the outcome reporting

Minutes of the Meeting

1) Opening and Goals

Mario: opens the meeting: we're here to start the IPv6 testbed related activities (<https://wiki.egi.eu/wiki/IPv6>).

After having clarified which are our goals, we should decide about the major points in the agenda: who can offer testbed resources; what to start from ; where to install required services to coordinate our activities; how to organize the testing activities and the related reporting; how to collaborate with HEPiX IPv6 and EGI-Inspire JRA1 (tools for EGI Operations).

About our goals for setting up an EGI IPv6 testbed: Our **goals** are the following ones:

1. Allow general purpose testing of UMD components using the IPv6 protocol
2. Enable specific IPv6 test campaigns on selected UMD components or required external dependencies
3. Provide a hands-on IPv6 testbed for possible IPv6 tutorials for the EGI site administrators community, both on IPv6 in general and IPv6 Security
4. Enable IPv6 testing of specific applications relevant to the EGI UCB / User Community

5. Allow the IPv6 testing of EGI-Inspire JRA1 Operational Tools components

6. Complement the work done by the HEPiX IPv6 WG, focusing on the middleware

2) Short report from the HEPiX IPv6 WG

Dave reports about the HEPiX IPv6 activities (<https://w3.hepik.org/ipv6-bis/doku.php>) : We started last year and met through regular quarterly f2f meetings.

HEPiX concentrates on HEP related issues and aspects. Very much related to W-LCG activities

Our focus is on monitoring and applications. Also middleware in any case.

We currently have 7 active sites. Essentially 1 node per site.

We have installed GridFTP servers – we have a full mesh of GridFTP connectivity working

Now , our next steps are data transfer and close collaboration with CMS – FTS (File Transfer Service)

Data Challenges: We might be installing FTS in parallel to CMS studies

Also the Storage Element based on DPM is a good candidate to test.

We also started a global survey to understand which application you have and which might have problems.

By the end of April we will have full list of applications. IPv6 readiness will be assessed.

The plan is to gradually increase the testbed, test not only functionality, but also performance and stress test. 2013 there should be the live production WLCG grid (LHC will be in pause)

I just gave a presentation to the W-LCG Management board: they support our activities.

The idea is: We have no absolute IPv6 requirement today, so let's start doing things now, well in advance.

All test s will involve security – Not before 2014 for full support of IPv6-only

3) Which sites are available to offer resources:

Mario asks about the intention to offer resources to the testbed and the UMD middleware family which each one of us could test. Mario reports that **NGI_SI (Slovenia) ARNES** cannot join today's meeting but is interested in participating in the EGI IPv6 testbed (mostly for ARC resources).

- **SWITCH:** we can offer a set of nodes; we intend to test ARC and gLite
- **FZU METACENTRUM:** we will test the LB using IPv6 and we will set up an LB node
- **GARR:** We will provide various gLite profiles. We might consider deploying UNICORE if no UNICORE-related site shows up to join the EGI testbed.

4) Where to install relevant services for the testbed

Mario proposes to start creating a table of resources on the EGI net sup wiki – already drafted at <https://wiki.egi.eu/wiki/IPv6Testbed>

Alessandro proposes to use the GOC-DB, or a stand-alone instance of the GOC-DB. This should be possible – registering the site as a “testing” site, and not a production one, and tagging it as IPv6 site. We decide to ask GOCDB people about this possibility.

About the **naming convention for the nodes**: Mario proposed to use the same convention used by HEPiX IPv6 WG:

- nodename for both IPv4 and IPv6 DNS entries,
- nodename-v4 for the IPv4 address only,
- nodename-v6 for the IPv6-only address.

This has the advantages to be easily mnemonic and practical if one wants to be easily sure – from the client side – what protocol one is trying to use. No problems for certificates if one uses the DNS cert extensions. SWITCH (Simon) objects that this is not very comfortable and easy given the practices consolidated at SWITCH.

Finally we agreed that if possible we should use the HEPiX convention, and, if not, in any case please specify clearly what DNS policy has been used.

Mario reports about the newly installed **VOMS for IPv6 testbed**: a new VO called “eginetsup” has been created and the VOMS endpoint is available at <https://voms-4.dir.garr.it:8443/voms/eginetsup> Please register to this VOMS. We should then ensure that our resources do support this VO, and the public key of the VOMS server should be circulated and installed on our resources.

5) How to organize testing and reporting

Mario: During EGEE SA2 IPv6 testing activities have been carried out, spanning from posting bugs about the middleware, creating testing tools (IPv6 code checker, both static and dynamic (IPv6_CARE tool)).

But also smoke testing after having installed and configured the gLite services. An IPv6 compliance quality metric has been created and provided to ETICS, now EMI. IN a recent EGI Tech Coord Board Meeting Alberto Di Meglio / EMI stated the IPv6 quality metric is back to operation and currently available in EMI.

Mario: I think we should start humble and simply report what currently happens, to start with, if we try to install, configure and use the UMD services using IPv6.

Alessandro wraps up what he did with testing gLite with IPv6 recently (November 2011):

The gLite CREAM CE was installed using IPv6 : I was not able to reach the YUM repository using IPv6.

To provide an IPv6 YUM repository, we will probably set it up at SWITCH.

I tried to work in an IPv6-only situation. Immediately the functionality Batch system – Torque had problems. Daemons had problems.

Third-party components also are not IPv6 compliant. We do not have direct control on these. I did stop there. Alessandro: I think the future scenario will be a Mixture on IPv4 and IPv6 clients.

Torque did not work. The connectivity between server and clients was not working because of IPv6-only set up. Yaim failed to properly configure it or not.

(IPv6-only clients connecting to IPv4-only boxes is of course a problem)

I also tried site BDII – it did not WORK – gLite site BDII

Mario: How to start testing and what – how to share our initial work:

SWITCH: Argus should be IPv6 compliant, we will focus on ARC (HEP) and gLite

FZU (Tomas): we will test the Logging and Bookeeping of gLite (METACENTRUM)

GARR: we will test gLite (and possibly UNICORE components)

Bruno: dCache: I would keep it out for the moment, it should be JAVA DESY - DESY will take care of it
dCache does not care: it is not connected to the network layer directly.

The data transfer for dCache. The DESY guys are the best persons to check that.(Bruno will try to contact them about it).

Mario proposes to start testing the basic site services: Site Information System and Computing Elements, also given that HEPiX WG is currently focusing on DPM SE and Data Transfers.

Alessandro stresses the importance of the monitoring and the collective services to be properly working using IPv6. We finally decide to start by core services but endorsing monitoring and collective services as soon as possible.

The idea will be to start providing simple test reports which will report about all encountered issues while installing, configuring and starting the basic grid services of the core site components.

Correspondingly, tickets will be opened in GGUS with an IPv6 tag, specifying the encountered problem.

Detailed discussion about points 6 and 7 are dropped from the agenda for today, due to absence of JRA1. (with HEPiX we already stated with Dave that we will keep high coordination)

IDENTIFIED ACTIONS FOR PEOPLE

- 1) All: Register to the EGI Network Support VOMS
- 2) Alessandro: verify with the GOC DB guys whether it will be possible to use the GOC DB to register the IPv6 resources
- 3) Mario –try and check whether GLUE could be modified to include a supported IP protocol version tag site-wise and service-wise.
- 4) Tomas will start installing the LB server at FZU.
- 5) Alessandro and Switch: go ahead setting up an UMD IPv6 repository
- 6) All: please start registering/reporting about available nodes (specifying their IPv4 and IPv6 addresses, UMD services, etc etc) in the Wiki table
- 7) All: ensure you do support the eginetsup VO
- 8) Mario: include new contacts for UK, CZ and CH in the NetSup mailing list (which is the one we will be using to start with for IPv6 related activities).

We will try to meet in person in Amsterdam next week (Jan 24) at the OMB, for the people who will attend.

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