

Team Meeting

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University Of Luxembourg

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Plan

- 1 Introduction
- 2 HPC
- 3 Other services
- 4 Conclusion

Introduction

Introduction

Training

- DUT in Computer Science
- Professional Bachelor Degree in systems, networks and applications administration

Experiences

- 2007, VersusMind : web development
- 2009, Faurecia : administration of a computing cluster
- 2011, Tutored Project : experiments and comparison of cloud computing solutions on Grid'5000
- 2011, WHD-RS : web hosting
- 2011 -, University of Luxembourg : HPC system administration !

My role

HPC system administration

- Work under the supervision of Sebastien Varrette
- HPC system administration: Gaia / Chaos / G5K
- Manage CSC services (gforge, VMs, ldap, etc)
- User support / doc
- Invisible tasks: monitoring, security, backups, hardware maintenance, etc



HPC

Website!

- <http://hpc.uni.lu>

HPC @ Uni.lu
Chaos, Gaia, Nyx and Granduc clusters

Get Updates: [By RSS](#) [On Twitter](#)

Systems - For Users - Live Status - Blog/News - About

Welcome to the HPC @ Uni.lu platform !
This is the official website of HPC @ Uni.lu platforms, which provides information about the computing clusters operated by the University of Luxembourg and the organizations running them.
The country that out-computes will be the one that out-compares.
— The Cloud as Catalyst series

Server room @ Beval!
This picture corresponds to server racks in the LCSB building @ End of, housing the [Gaia](#) cluster. The violet lights come from the Heisen disk enclosures.

Recent Posts

- Starting Virtual Machines on Chaos
- New 10 HPC Website
- Generating Ubuntu Packages under 3.2 Kernel for Linux 2.4
- 1A HPC in IT Nation
- 1A HPC in IT Nation

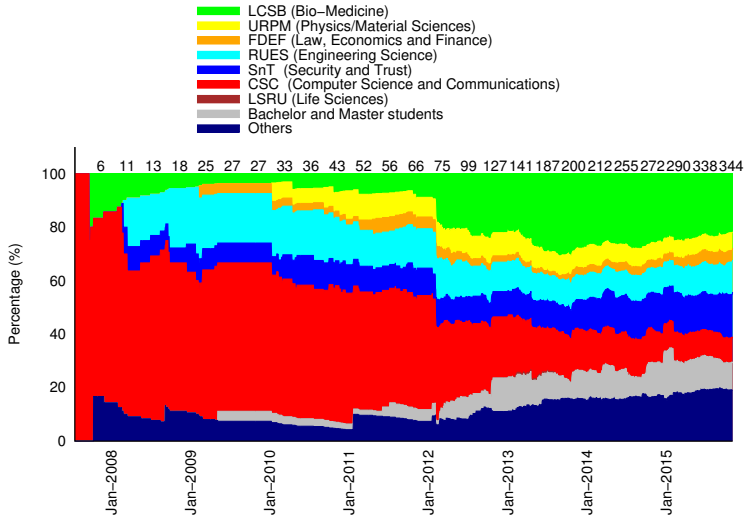
GitHub Repos

- virtio-bootstrap
- virtio-enc
- distfiles
- ganglia_infraiband_module
- modules-check
- launcher-scripts
- UserDoc

Tweets

ULHPC @ULHPC
Test of visualization nodes and configuration of the (HPC) infrastructure portal in progress.

HPC Guru
HPC Guru @HPC_Guru
#HPC User-only has a useful calendar for conferences.



HPC

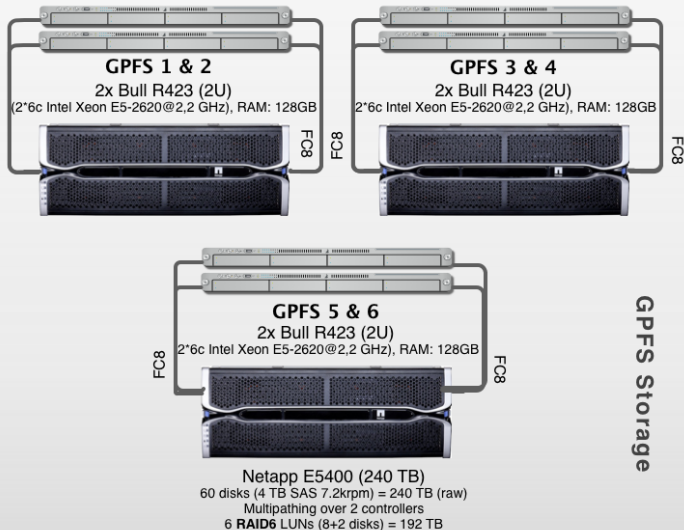
New hardware (2015)

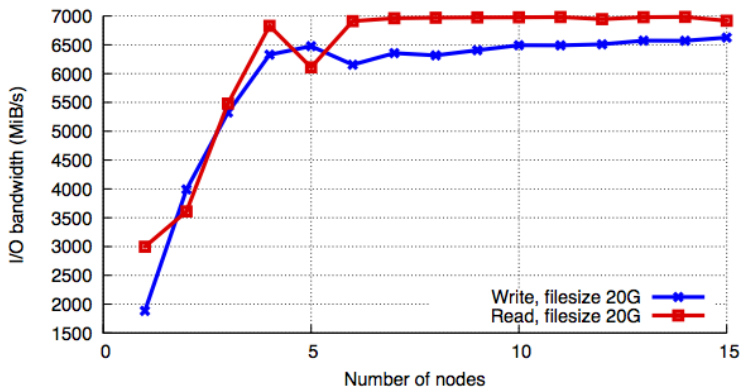
New computing nodes:

- one new bigmem node (gaia-80) and bigsmp node (gaia-81)
- gaia-[155-170]: 16 new Dell FC430 nodes
- moonshot1-[1-30]: 30 HP moonshot proliant M710

Storage:

- migration from NFS to GPFS (524TB)





HPC

New hardware (2015)

Very soon:

- GPFS extension (+175TB)
- Lustre extension (+131TB)
- 8 new Dell nodes (FC430)
- 60 new HP M710 cartridges
- Gaia-[75-79]: GPU upgrade from 1 K20/node, to 2 K40/node
- 4 Dell C4130: 4x K80/node

HPC

Hardware maintenance

The existing computing capacity must be maintained, we have replaced since the beginning of the year:

- 24 hard disks (11 in 2014)
- 1 SSD disk
- 4 motherboards
- 2 cpus
- 5 batteries (raid controllers)
- 17 memory dimms
- 5 power supplies
- 2 fans





HPC - Grid'5000

- Experimental grid for computer science research
- <http://grid5000.fr>
- 9 sites, 2010 cpus, 10010 cores
- Granduc cluster, 22 nodes, 44 cpus, 176 cores
- Petitprince cluster, 16 nodes, 32 cpus, 192 cores

Features

- Kadeploy, system deployment & personalized environments
- Kavlan, network isolation for your experiments
- Storage5k, reservation of storage space (in progress)



Other services



ejabberd



Gforge.uni.lu

Collaborative project management platform

- 433 users, 330 projects
- source code repositories (Git, Subversion)
- static web sites, mailing lists, bug tracker...

Upgrade from fusionforge 5.0.2 to 6.0.3

- immediate system actions
- many bug and security fixes
- refreshed graphic style

Gforge.uni.lu

gForge uni.lu

Log In

Projects Search

Home My Page Projects

gForge @ Uni.lu

Welcome on GForge @ Uni.lu

GForge @ uni.lu is a service offered to facilitate the scientific collaborations of people working at the University of Luxembourg. Inspired by the [InriaGForge](#), the general principle is to offer easy access through projects to subversion repositories, mailing lists, bug trackers, message boards/forums, task management, site hosting, permanent file archival, full backups, and total web-based administration. The major features are listed in [helpdesk website](#).

The [helpdesk website](#) provides informations to facilitate the use of GForge @ uni.lu.

Latest News

[Migration to Fusionforge 6](#)

Gforge@Uni.lu Statistics

Hosted Projects: 330
Registered Users: 433

Top Project Downloads

- 540 [LibGEP](#)
- 67 [Backup](#)
- 3 [Logics in Security Workshop](#)
- 2 [CARBON](#)
- 1 [Artificial Conversational Companion](#)

All the ranking
Most Active This Week

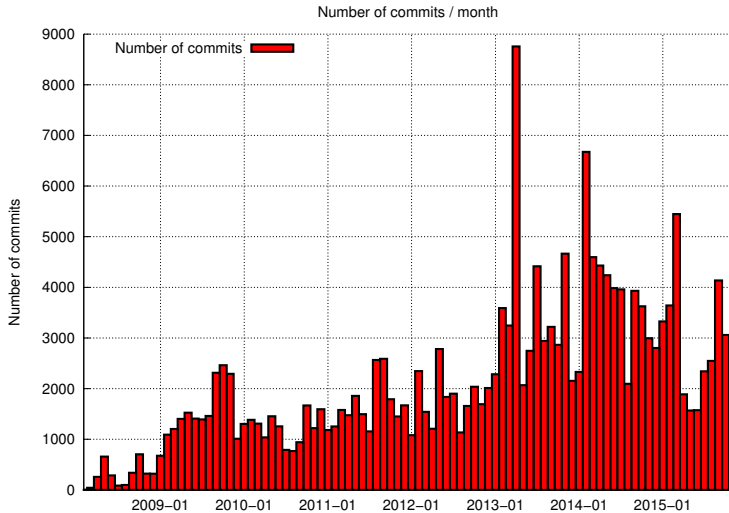
- 1 [LibGEP](#)

All project activities
Recently Registered Projects

- 10/28 [good-scientific-practise](#)
- 09/16 [NIDISC 2016](#)
- 08/17 [CrowdSenSim: Crowd Sensing Simulator](#)
- 07/25 [CARBON](#)
- 01/14 [MetaBio2015 Workshop](#)

uni.lu
UNIVERSITÉ DU LUXEMBOURG

Gforge.uni.lu



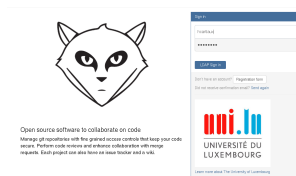
Gitlab.uni.lu

Gitlab is a modern collaboration system centered around git.

Features

- git repository management
- code reviews
- issue tracking
- wikis
- etc

GitLab Community Edition



Other services

Jabber server

- Instant messaging
- Text conference rooms (hpc-users)
- im.csc.uni.lu / use your HPC credentials

Etherpad

- Collaborative and real-time text editor
- <https://im.csc.uni.lu>

Stackedit

- Markdown editor
- <https://hpc.uni.lu/stackedit>

Conclusion

- Improved quality of service (stability, availability)
- Evolution of the Gaia storage infrastructure
- New computing nodes
- Migration to puppet 4 in progress
- Gforge upgrade

Thank you for your attention !