

# Team Meeting

Hyacinthe Cartiaux

University Of Luxembourg

November 30, 2018

# 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 & network administration: Iris / Gaia / Chaos / G5K
- Manage research services (Gforge, Gitlab, VMs, Idap, etc)
- Monitoring, security, backups, hardware maintenance
- User support / doc



# HPC

## Website!

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

**HPC @ Uni.lu**  
High Performance Computing in Luxembourg

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

Systems For Users Live Status HPC School Blog News About

Welcome to the HPC @ Uni.lu platform !  
This is the official website of HPC @ Uni.lu platform, which assembles information about the computing clusters operated by the University of Luxembourg and the organization running them.  
The country that out-computes will be the one that out-competes.  
— The Council on Competitiveness

**Recent Posts**

- 8th Supercomputing Camp (SC-Camp 2017)
- Luxembourg enters TOP500
- UL HPC School 2017
- Preliminary Performance Results of the 8th cluster
- UL HPC Incoming HPC Deployments for 2017
- Tutorial: Reproducible Research @ CloudCamp 16

**GitHub Repos**

tutorials launcher scripts  
documents profiles

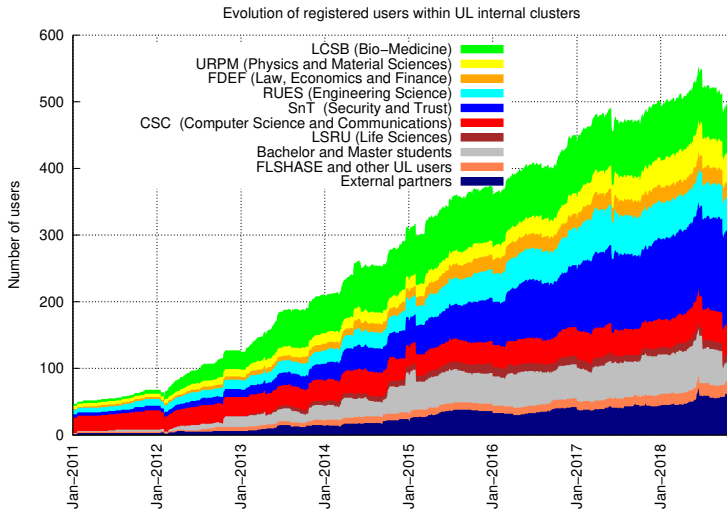
**Tweets by @ULHPC**

ULHPC (@ULHPC)  
Last session of this UL #HPC School by @ulhpc, HPC workshop with MPI job: GPU Microelectronics and HPC

**Featured Systems**  
We currently operate a total of 602 computing nodes

**User Docs**  
We took the time to make the HPC documentation as

UNIVERSITÉ DU LUXEMBOURG  
UL CDC (Centre de Calcul)  
UL Computing Center, hosting State of the-art High Performance Computing clusters.



# HPC

## Iris - extension

- 309 Tflops (CPU RPeak)
- 190 nodes (**+60 regular nodes, +18 GPU nodes, +4 BigMem node**)
- Infiniband EDR network: 100Gb/s
- High Perf. storage based on GPFS (**2274TB raw**)
- **Scratch storage based on Lustre (1300TB raw)**

## Backup Infrastructure

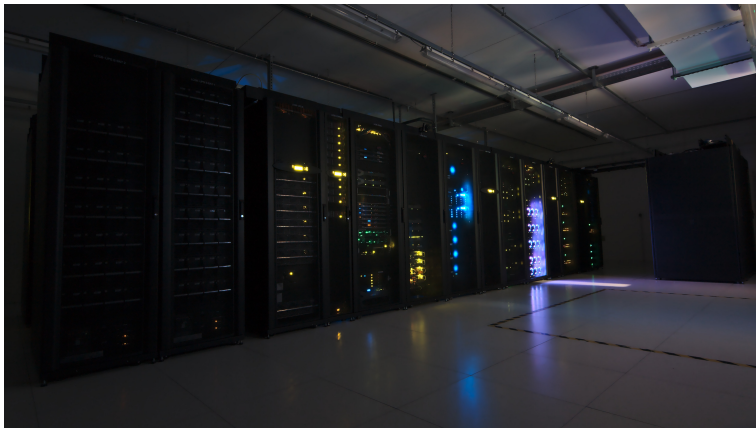
- 2 existing servers in Belval (BT1) and Kirchberg
- 1 server with 60 disks of 10TB, in CDC
- Snapshots of virtual machines
- Backups of project directories and user home directories
- Rotation policy

# HPC

## Hardware maintenance

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

- 1 Motherboards
- 2 Memory DIMMS
- 2 Power supplies
- 2 Raid controllers
- 5 Raid controller battery
- 3 Disks





# Other services



## Collaborative project management platform

- 515 users, 365 projects
- source code repositories (Git, **Subversion**)
- **static web sites**
- **mailing lists**
- bug tracker...

# 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

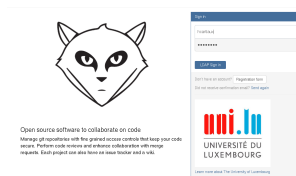
# Gitlab.uni.lu

Gitlab is a **modern** collaboration system centered around git.

## Features

- git repository management
- continuous integration (docker)
- code reviews
- issue tracking
- wikis

GitLab Community Edition



## Other services

### Etherpad

- Collaborative and real-time text editor
- <https://hpc.uni.lu/pad/>

### Privatebin

- Pastebin-like, text and code sharing
- Client-side encryption
- <https://hpc.uni.lu/privatebin>

### Owncloud

- Dropbox-like
- Data synchronization
- Use your HPC credentials

# Conclusion

Next tasks:

- Consolidated Gitlab infrastructure
  - Upgrade to Gitlab Enterprise Edition
  - Enable Gitlab-pages, Mattermost, Docker registry
- Update Gforge@uni.lu (FusionForge 6.1)
- Migrate all services to the new network (owncloud)

Thank you for your attention !