Galaxy and UC13

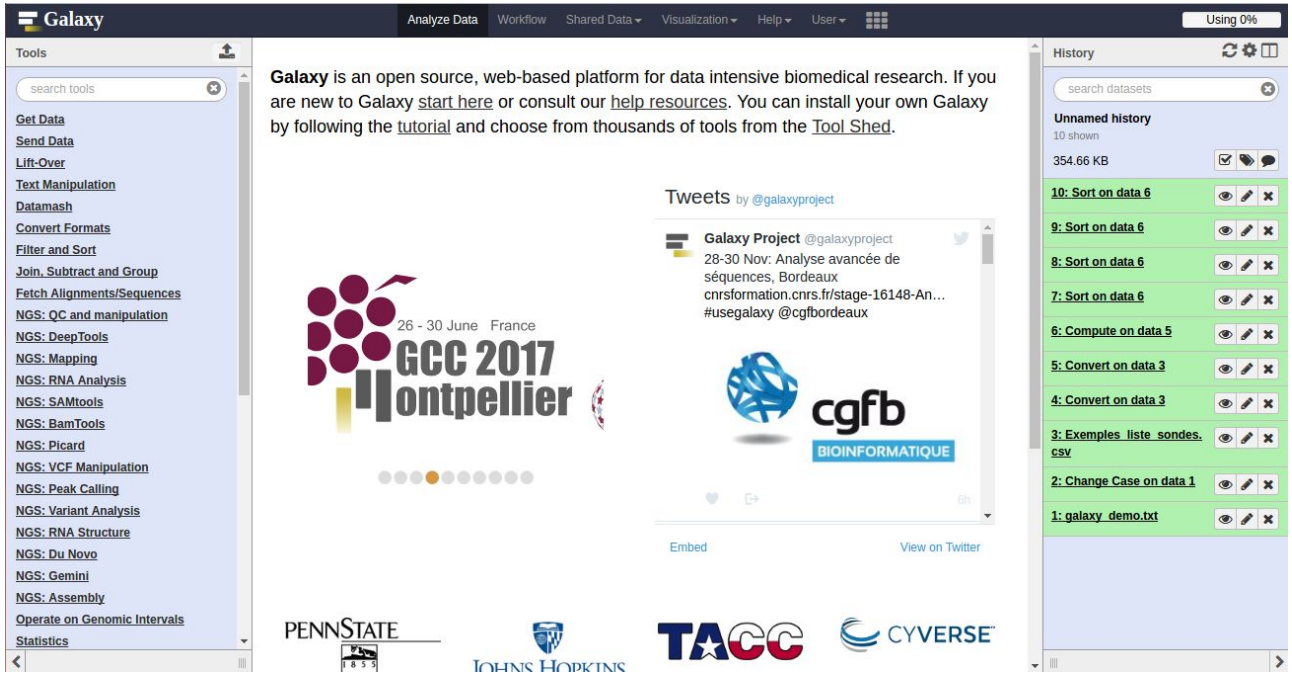
Cyclone usecases Hackathon, 15 nov 2016.

Samuel Blanck, EA 2694, Université Lille 2 Droit et Santé

What is Galaxy ?

- “Online bioinformatics analysis for everyone”
- Open, web-based platform for data intensive biomedical research
- Academic Free License version 3.0
- Penn State, John Hopkins University
- www.galaxyproject.org

What is Galaxy ?



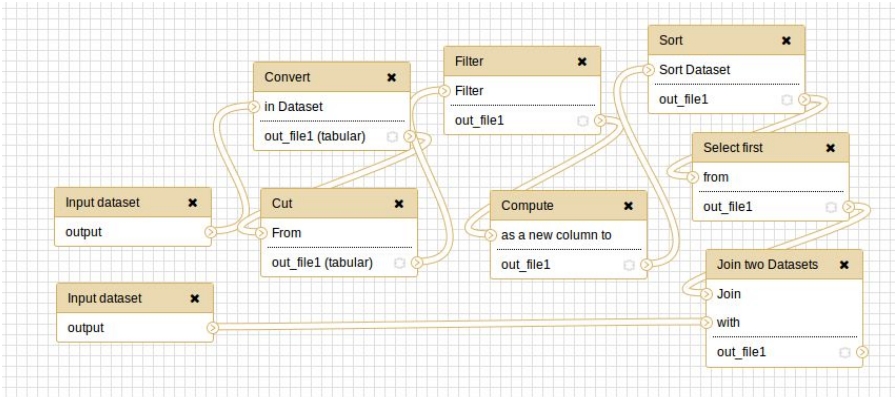
What is Galaxy ?

- Database
  - Sqlite (by default)
  - Possibility to switch to MySQL or PostgreSQL
- Web server
  - Built-in HTTP server, written in Python

Galaxy also supports TORQUE PBS, PBS Pro, Platform LSF, and Sun Grid Engine clusters

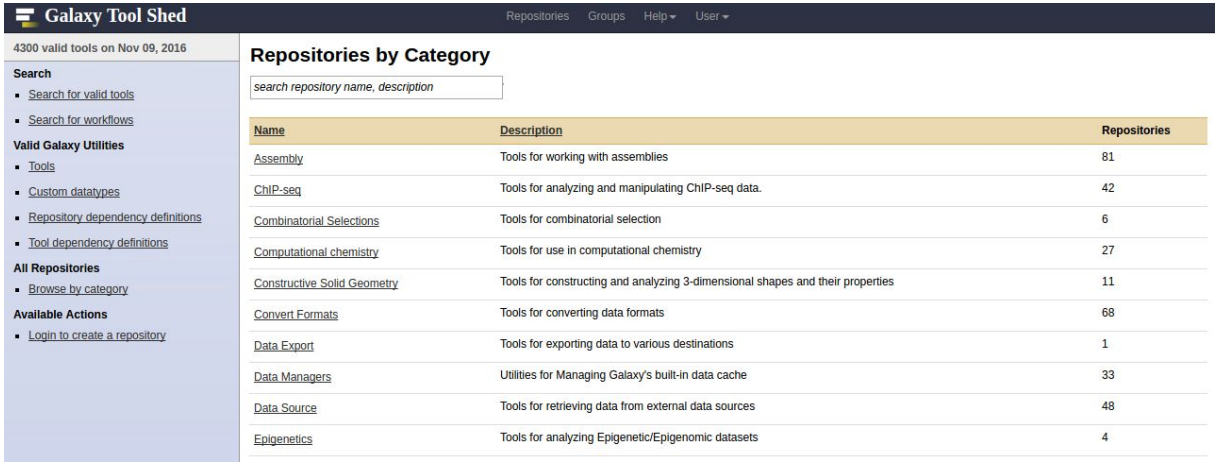
What is Galaxy ?

- “Push-button” interface, easier than command line
- Keep track of analysis
- Possibility to create workflows
- Share results, histories and workflows
- Greater reproducibility of the analysis



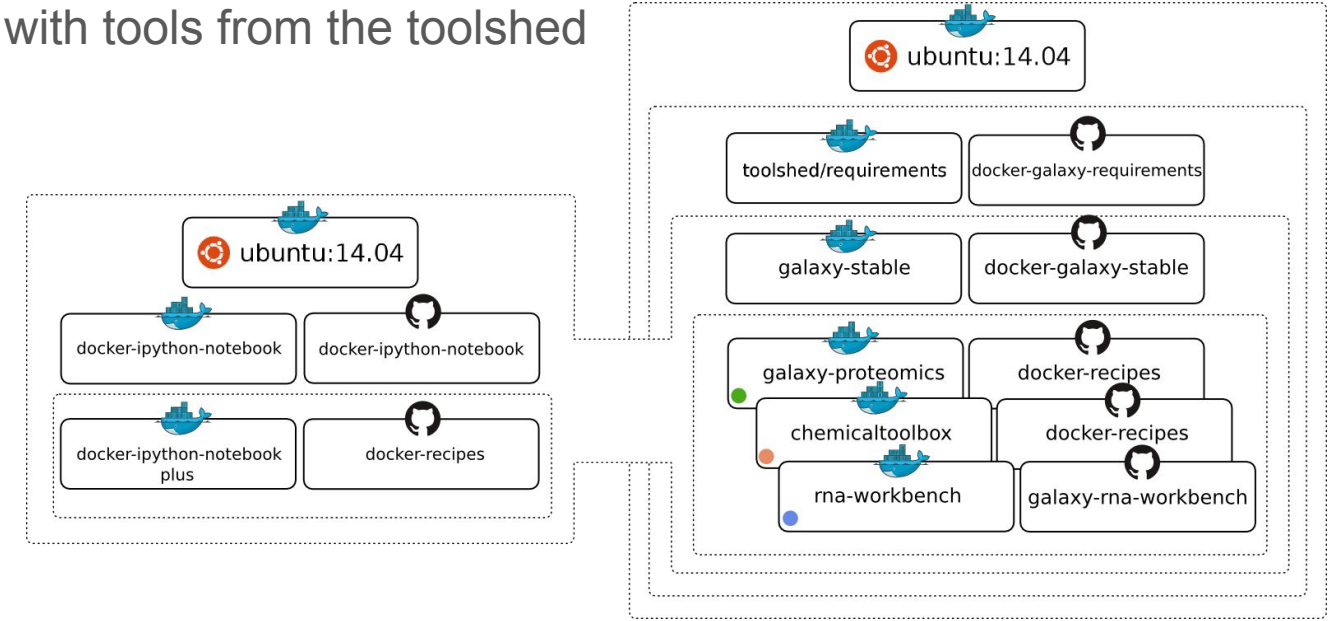
What is Galaxy ?

- Galaxy is customizable
- Possibility to integrate custom tools thanks to a “XML wrapper” framework
- Galaxy toolshed is the Galaxy appstore
- Thousands of tools available



Galaxy + Docker

- Several “flavours” of dockerized Galaxy
- Easy to deploy
- Easy to populate with tools from the toolshed



Where to find Galaxy ?

Many public servers available

- usegalaxy.org (“Galaxy team” server)
- In France : ABiMS (Roskoff), GalaxEast (Strasbourg), Genouest (Rennes), ….

In the clouds

- AMIs on AWS
- IFB cloud

Galaxy and IFB

Several Galaxy VM are available on IFB-core stratuslab cloud :

- Galaxy FROGS
- Galaxy STACKS
- Galaxy MODAL

bilille (IFB Platform of Lille)

- Test Galaxy VM on Openstack

But it’s not possible to share data between users

UC13 workflow