The Galaxy VM Launcher

https://bitbucket.org/jmchilton/galaxy-vm-launcher

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Project Background

- Galaxy workflow built for clinical variant detection
- Needed Clinical Laboratory Improvement Amendments (CLIA) certification
  - Cannot change system after certified.
  - Rules out using the University's Galaxy instance.
- To the Cloud

CloudMan Concerns

- Storage costs
- ~~In addition to Amazon, we wanted to target MSI's OpenStack cloud~~
- ~~CloudMan image out of date~~

galaxy-vm-launcher was built to address these concerns.

Amazon File Storage

- Two Options
  - EBS - persistent storage lives past life of VM. ($)
  - Instance Storage - Transient storage that disappears with virtual instances. (Free with compute purchase.)

CloudMan depends heavily on EBS, galaxy-vm-launcher potentially saves money by not utilizing EBS storage.

Other Differences

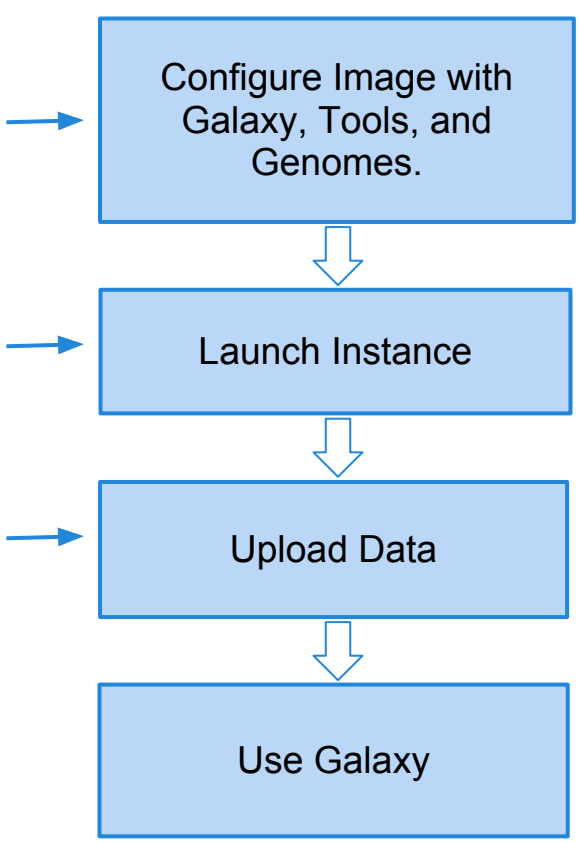
Standard operating procedure (w/CloudMan)

Semi-manual process, mi-deployment collection of scripts designed to help automate.

Easy to use web interface with management console.

Can use FTP or Galaxy web interface.

Arbitrary break down of work to make galaxy-vm-launcher look more impressive



With galaxy-vm-launcher

All can be configured via one simple settings file and launched via one command-line execution

Also: Users, credentials, histories, and workflows can all be configured from the same settings file..

Reproducibility: Easily rebuild "identical" Galaxy VMs on different clouds (or locally with Vagrant) from one settings file.

Breakout Session @ 3:15

Galaxy and Production: Automation strategies for Data, Tools, & Config

http://wiki.g2.bx.psu.edu/Events/GCC2012/Program/Breakouts/AutomationStrategies

Thanks

People I "borrowed" code from:

- Enis Afgan, Ph.D., et. al. (https://bitbucket.org/afgane/mi-deployment)
- Brad Chapman, et. al. (https://github.com/chapmanb/cloudbiolinux)

CLIA Project

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    - Matthew Bower
- Other Minnesota Supercomputing Institute Galaxy Team Members
  - Daniel Debertin
  - Jim Johnson
  - Ry4an Brase (Alumni)

Whole Galaxy Team