Mercurial for Galaxy Admins

Ry4an Brase
Univeristy of Minnesota
Supercomputing Institute
Hi.
Two Audiences

Scientists

Computer Folks

root@galaxy:~#
Two Audiences

Scientists

Computer Folks

root@galaxy:~#
A Pleasant Diversion for the Scientists Ignoring This Talk

- A, B, C: Ingredients
- A+B, A+C, B+C: Eaten in some culture
- A+C+B: eaten in no cultures
Mercurial is:
Source Control
Mercurial is:
Modern
Source Control
Mercurial is: Modern, Decentralized Source Control
Mercurial is: Modern, Decentralized, Delta-based Source Control
Mercurial is:

Galaxy's
Modern,
Decentralized,
Delta-based
Source Control
## Delta-Based vs. Snapshots

### Snapshots
- Series of "Photos" of your work
- Let you see what your file looked like at time $X$
- `rename = delete + add`
- Actually Stored as Deltas

### Deltas
- Series of changes to your work
- Also let you see what your file looked like at time $X$
- follows renames
- Composite-able
Merging
<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
<th>Author</th>
<th>Commit</th>
<th>Parent</th>
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<tbody>
<tr>
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<tr>
<td>2010-05-14</td>
<td>Enable images and binary datasets to work within the display framework. More work is needed to enable images to work well.</td>
<td>Jeremy Goecks / jgoecks</td>
<td>3788</td>
<td>3787</td>
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<td>Fixes for editing tool information and submitting a tool for approval in the community space.</td>
<td>Greg Von Kuster / greg</td>
<td>3787</td>
<td>3786</td>
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Install Workflow

1. Clone from bitbucket
2. Make Local Changes
3. Run Galaxy
1. Clone from bitbucket

$ hg clone http://bitbucket.org/galaxy/galaxy-central
destination directory: galaxy-central
requesting all changes
adding changesets
adding manifests
adding file changes
added 3789 changesets with 17207 changes to 4176 files
updating to branch default
2691 files updated, 0 files merged, 0 files removed, 0 files unresolved
2. Make Local Changes

$ mv tool_conf.xml.sample
    tool_conf.xml
$ vi tool_conf.xml

(repeat for universe_wsgi.ini, datatypes_conf.xml, etc.)
Checking For Updates

$ hg incoming
comparing with http://bitbucket.org/galaxy/galaxy-central
searching for changes
changeset: 3789:11951fe9c714
tag: tip
user: jeremy goecks
date: Sat May 15 13:12:38 2010 -0400
summary: Better UI flow for changing an HDA's data type.
One-Time Prep. for Updates

$ vi .hgignore
  # Config files
  #universe_wsgi.ini
  #reports_wsgi.ini
  #datatypes_conf.xml
  #tool_conf.xml
  #static/welcome.html.*

$ hg rename --after tool_conf.xml.sample tool_conf.xml
Repeatable Upgrade Sequence

1. Commit Local Changes
2. Pull New Changes From Bitbucket
3. Merge in Changes
1. Commit Local Changes

$ hg status
M .hgignore
A tool_conf.xml
R tool_conf.xml.sample

$ hg commit -m 'Local Changes'

$ hg status

$ hg log -l 1
changeset:   3789:c566ef649733
user:        Ry4an Brase <ry4an@mini>
date:        Sun May 16 10:02:48 2010 -0500
summary:     Local Changes
2. Pull New Changes from BB

$ hg pull
pulling from http://bitbucket.org/galaxy/ga...
searching for changes, adding changesets
adding manifests, adding file changes
added 1 changesets with 1 changes to 1 files (+1 heads)
(run 'hg heads' to see heads, 'hg merge' to merge)

$ hg heads --style=compact
3790:3788 11951fe9c714 2010-05-15 13:12 -0400 jeremy
   Better UI flow for changing an HDA's data type.

3789 c566ef649733 2010-05-16 10:02 -0500 ry4an
   Local Changes
A Better Look At Both Heads

$ hg serve ; chromium http://localhost:8000
3. Merge in Changes

$ hg merge
1 files updated, 0 files merged, 0 files removed, 0 files unresolved
(branch merge, don't forget to commit)

$ hg commit -m 'merged in from central'

$ hg heads
changeset: 3791:6f1590e8cb9a
parent: 3789:c566ef649733
parent: 3790:11951fe9c714
user: Ry4an Brase <ry4an@mini>
date: Sun May 16 10:29:01 2010 -0500
summary: merged in from central
A Better Look At The Merge

/home/ry4an/galaxy-central

graph

merged in from central
default tip
103 seconds ago, by Ry4an Brase

Better UI flow for changing an HD
22 hours ago, by jeremy goecks

Local Changes
27 minutes ago, by Ry4an Brase

Enable images and binary datasets to work
work is needed to enable images to work
24 hours ago, by jeremy goecks
Merge Conflict!
A Pleasant Diversion for the Scientists Ignoring This Talk

- A=Chocolate
- B=Cheese
- C=Beer
- A+B=Cheese-cake
- A+C=Stout
- B+C=Soup
- A+B+C=horrid