Galaxy2Shiny2Galaxy
Combining Galaxy with Shiny (and doing other bad things)

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Shiny

- an R package to build interactive application

- developed by RStudio (shiny.rstudio.com)
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...without relying on Docker
Galaxy Server

the RNA-Seq tool creates count table
Galaxy Server

the RNA-Seq tool creates count table and a new Shiny app

URL for Shiny app is provided as additional history item
use the Shiny app....
use/share the Shiny app outside of Galaxy
generated plots and tables can be downloaded

use the Shiny app....
....the not so bad things

tool.xml

<command> Rscript --args opt1=$opt1 ...
    file1=$outputfile1 file2=$outputfile2</command>

Rscript

generates count table (as before)
and sets up a new Shiny app on the Shiny Server

→ each count table has its own Shiny app
....the not so bad things

on the Shiny server each Shiny app has its own directory

```
server.R
ui.R
```
copy of generic scripts
....the not so bad things

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server.R
ui.R  
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qCountTable -> /path/to/012/dataset_12345.dat
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log

each interaction in the Shiny app is logged
....the bad things

on the Shiny server each Shiny app has its own directory

server.R
ui.R  copy of generic scripts

qCountTable -> /path/to/012/dataset_12345.dat

log  each interaction in the Shiny app is logged

encoded.history.id  generated from $outputfile2
....the very bad things

on the Shiny server each Shiny app has its own directory

server.R has the privileges (API key of a Galaxy admin account) to store tables and plots as new datasets in the history

ui.R

qCountTable

log

encoded.history.id generated from $outputfile2
generated plots and tables can be downloaded
generated plots and tables can be downloaded and are stored simultaneously as new datasets...the very bad things GREAT
a big thanks to:

Michael Stadler and Hélène Royo (FMI)

Helena Rasche for PR #3622 ‘Util to encode or decode values’

see Poster G06 for more details

github.com/hrhotz/galaxy2shiny2galaxy

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