High-Speed Networking and Distributed Applications
Lab Exercise 2: Introduction to the GENI APIs and `omni`

CS-491 **Summer 2013**

In this lab exercise, you will set up the GENI Control Framework on your computer and work with resource specification (rspec) XML files. You will also load and run software automatically in a GENI node using the rspec's install script functionality.

Procedure

Step 0: Download `gcf` from `http://software.geni.net/local-sw/download&software=gcf-2.3.3.tar.gz` and follow the instructions at `http://trac.gpolab.bbn.com/gcf/wiki/QuickStart` to install it.[1] Stop right after step 3 "Install software dependencies", because configuration will be handled through the GENI Portal.

Step 1: Go to your GENI Portal account and click the "Profile" link at the top navigation, then click "Configure `omni`".

Download your customized configuration data, making sure you select `KU-CS491` as your default project.

Run

```
omni-configure.py
```

in the terminal and `omni` will autoconfigure itself based on the configuration data you downloaded. If it complains that a key already exists, hit `n` to not replace it.

Step 2: Create a slice through the GENI Portal and call it $\underset{\text{username}}{\_\_\_\_\_}$`lab2`. Launch Flack.

Step 3: Import the experiment. Select "Import → Import from Web" in Flack, and supply this URL: `http://alis0nc.github.io/cs491/lab2/lab2.rspec`. Specify that you want to use the Kettering aggregate manager, `geni.kettering.edu.cm`.

Acknowledgement

Adapted from Wong, G. (2013-07-21). "Getting started with GENI and the GENI Portal, part II". Presented at the *17th GENI Engineering Conference*, Madison, Wisconsin. `http://groups.geni.net/geni/wiki/GEC17Agenda/GettingStartedWithGENI_II`

[1] If you're using a syslab computer, you should copy the `gcf-2.3.3` directory to your home folder because you don't have root privileges on the box. If you're using your own laptop, you can copy the directory anywhere you want.