

High-Speed Networking and Distributed Applications

Lab Exercise 1: Introduction to GENI and the GENI Portal

CS-491

Summer 2013

In this lab exercise, you will reserve some compute resources in the GENI environment using the graphical tool Flack. You will log into these virtual machines and verify IP (layer 3) connectivity between them using `ping`. Time permitting, you will also disable IP connectivity between them and verify layer 2 connectivity using `pingPlus`.

Procedure

Step 0: Obtain a GENI Portal account and join the CS491 project on the GENI Portal.

Step 1: Generate and download your `ssh` keypair.

Step 2: Create a slice in Flack with the name _____lab1.
username

Step 3: In Flack, reserve two virtual machines at the Kettering InstaGENI rack (`geni.kettering.edu.cm`). Name one of them `client` and the other `server`.

Wait until the resources are ready (the Flack canvas will turn green).

Step 4: Log into the nodes:

client login: `ssh -p_____@_____geni.kettering.edu`
portusernamehostname

server login: `ssh -p_____@_____geni.kettering.edu`
portusernamehostname

Step 5: Verify IP (layer 3) connectivity between the two nodes by `ping`.

server's data interface: _____
nameIP address

client's data interface: _____
nameIP address

Time permitting: Disable IP connectivity and verify layer 2 connectivity between nodes by `pingPlus`.

<http://paws.kettering.edu/~chan7781/geni/pingPlus-0.2.tar.gz>

server's data interface: _____
hardware address

Step 6: Clean up after yourself. Log out of your nodes, and delete your resources or let them expire.

Acknowledgement

Adapted from Edwards, S. & Riga, N. (2013, July). “Getting started with GENI and the GENI Portal, part 1”. Presented at the *17th GENI Engineering Conference*, Madison, Wisconsin.

http://groups.geni.net/geni/wiki/GEC17Agenda/GettingStartedWithGENI_I