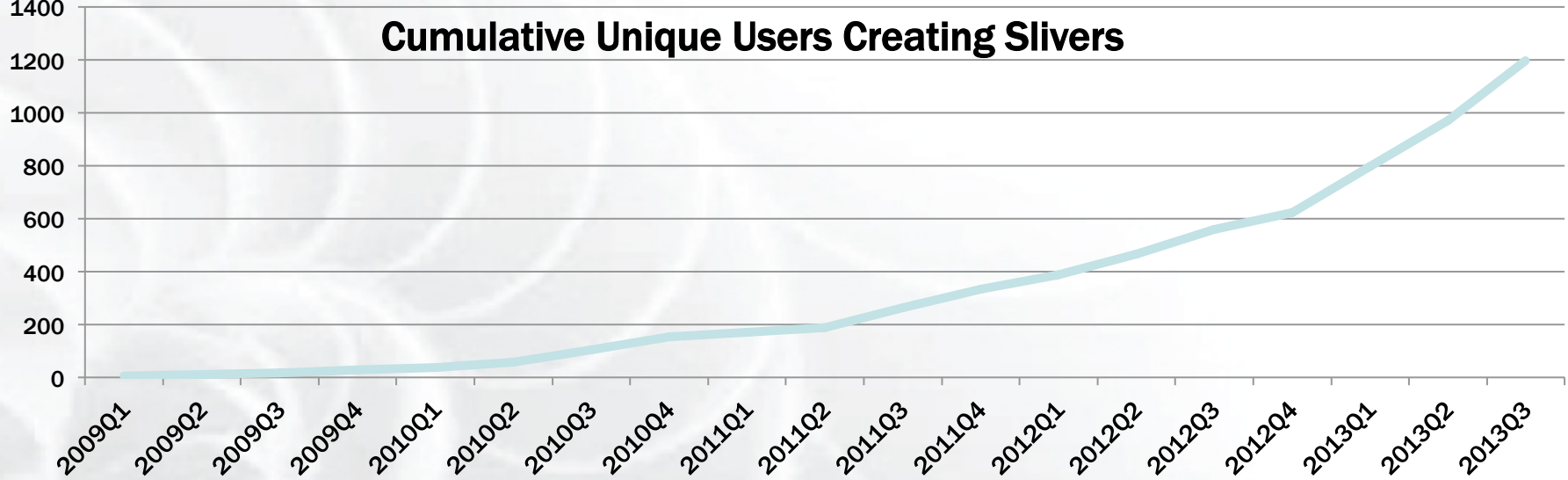
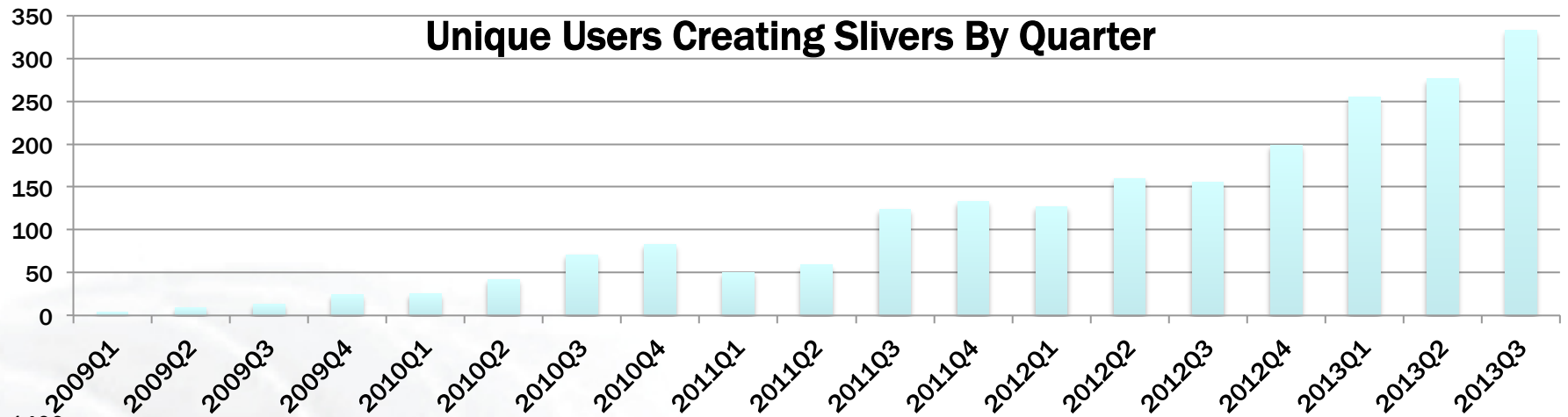




GENI Experimenter Support An Update

GENI Engineering Conference 18

Vicraj Thomas
28 October 2013
GENI Project Office



Over 1200 unique users and rapid classroom uptake!

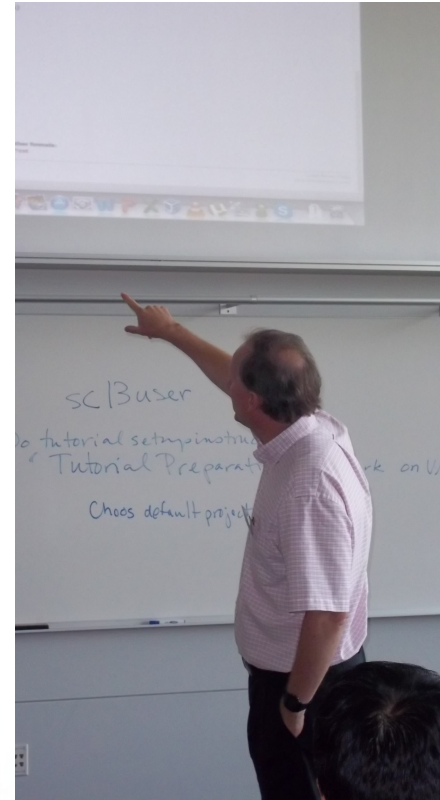
Stress multiple aspects of GENI

- Non-IP
- Large-scale
- High-throughput
- Long-lived experiments and services
- Opt-in users
- Tools for scientists from other domains
 - Computational genomics, materials chemistry, advanced manufacturing

More at the New Shakedown Experiments session
Tuesday at 8.30am

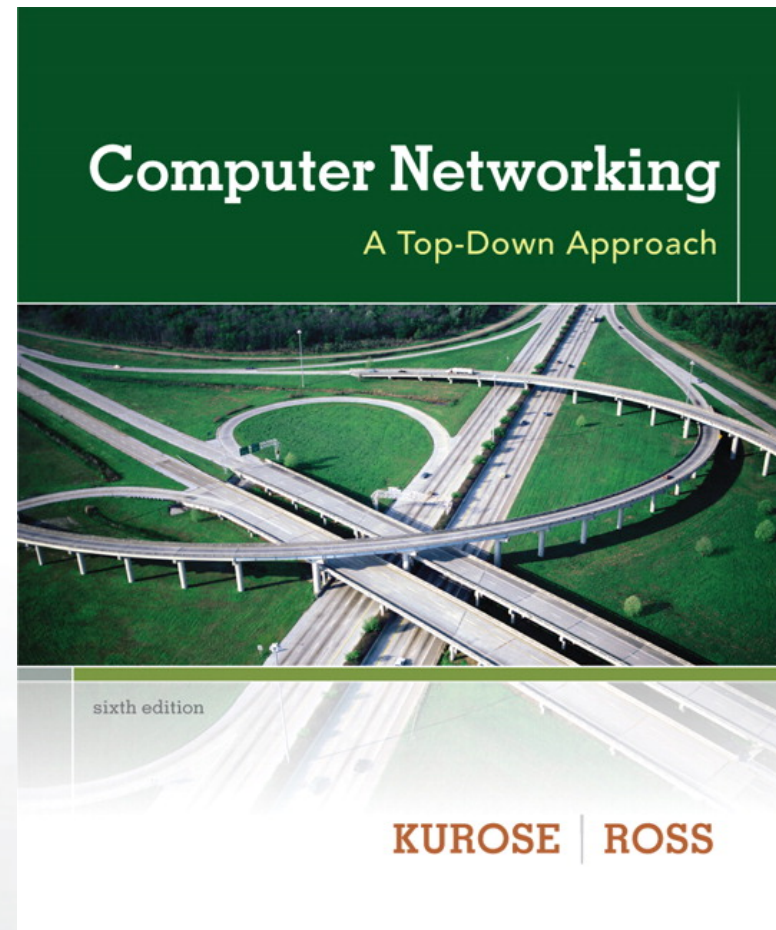
Classes using GENI in Fall 2013

- Prasad Calyam (U. of Missouri)
- Zongming Fei (U. of Kentucky)
- John Geske (Kettering U. – 2 classes since last GEC)
- Deniz Gurkan (U. of Houston)
- Christos Papadopoulos (Colorado State)
- Violet Syrotiuk (Arizona State U.)
- Zhi-Li Zhang (U. of Minnesota)
- Thanasis Korakis (NYU Poly)



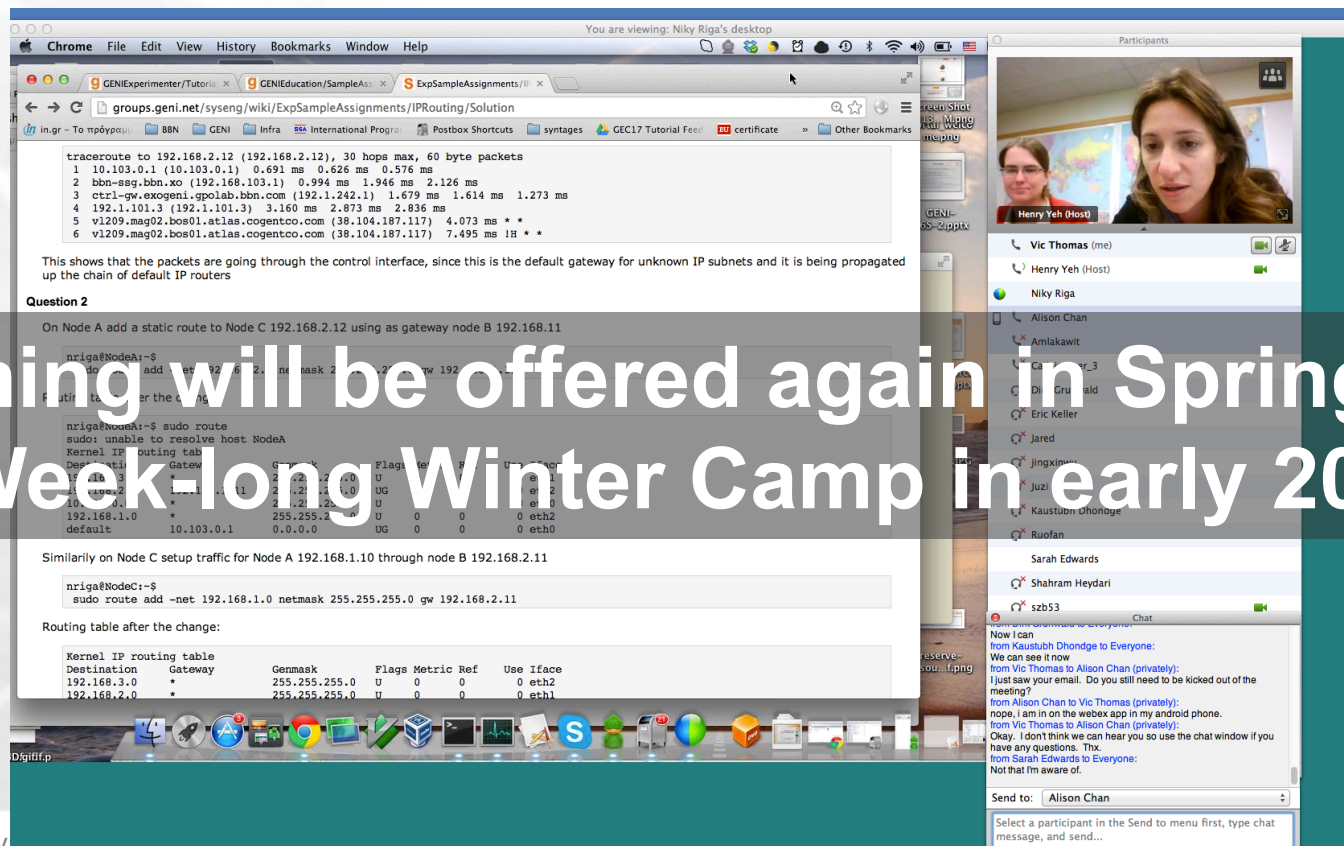
Let us know if have taught or are planning using GENI in your class.

- Modules for instructors to demonstrate concepts
- Assignments with student handouts, instructor guides and videos
- Based on widely used networking textbooks
- Coursework in MOOC format



Tremendous response to the “Train the TA” Tutorials

- Offered twice – each over two Friday afternoons over WebEx
- 31 TAs and instructors trained
- Feedback (22 respondents)
 - 17 - Little to no prior experience w/ GENI
 - 20 – Comfortable leading or assisting with a GENI-based lab after tutorial



The screenshot shows a WebEx session with a terminal window displaying network configuration commands and a chat window with participants. The terminal output includes:

```

traeroute to 192.168.2.12 (192.168.2.12), 30 hops max, 60 byte packets
 1 10.103.0.1 (10.103.0.1) 0.691 ms 0.626 ms 0.576 ms
 2 bbn-ssg.bbn.xo (192.168.103.1) 0.594 ms 1.946 ms 2.126 ms
 3 ctrl1-gw.exogeni.gpolab.bbn.com (192.1.242.1) 1.679 ms 1.614 ms 1.273 ms
 4 192.1.101.3 (192.1.101.3) 3.160 ms 2.873 ms 2.836 ms
 5 v1209.mag02.bos01.atlas.cogentco.com (38.104.187.117) 4.073 ms * *
 6 v1209.mag02.bos01.atlas.cogentco.com (38.104.187.117) 7.495 ms 1H * *
  
```

Question 2

On Node A add a static route to Node C 192.168.2.12 using as gateway node B 192.168.11

```

nriga@NodeA:~$ sudo route
sudo: unable to resolve host NodeA
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
192.168.1.0 * 255.255.255.0 U 0 0 0 eth2
192.168.2.0 * 255.255.255.0 U 0 0 0 eth2
default 10.103.0.1 0.0.0.0 UG 0 0 0 eth0
  
```

Similarly on Node C setup traffic for Node A 192.168.1.10 through node B 192.168.2.11

```

nriga@NodeC:~$ sudo route add -net 192.168.1.0 netmask 255.255.255.0 gw 192.168.2.11
  
```

Routing table after the change:

```

Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
192.168.3.0 * 255.255.255.0 U 0 0 0 eth2
192.168.2.0 * 255.255.255.0 U 0 0 0 eth1
  
```

The chat window shows a list of participants including Henry Yeh (Host), Vic Thomas (me), Niky Riga, Alison Chan, Amlakwit, Eric Keller, Jared, Jinxin, Juzi, Kaustubh Dhonege, Ruofan, Sarah Edwards, Shahram Heydari, and szb53. A chat message from Kaustubh Dhonege is visible: "Now I can from Kaustubh Dhonege to Everyone: We can see it now from Vic Thomas to Alison Chan (privately): I just saw your email. Do you still need to be kicked out of the meeting? from Alison Chan to Vic Thomas (privately): nope, I am in on the webex app in my android phone. from Vic Thomas to Alison Chan (privately): Okay. I don't think we can hear you so use the chat window if you have any questions. Thx. from Sarah Edwards to Everyone: Not that I'm aware of." The send-to field is set to Alison Chan.

GENI at Upcoming Conferences

SIGCSE ATLANTA 2014

IC2E 2014: IEEE International Conference on Cloud Engineering



Boston, Massachusetts, USA

March 11-14, 2014



NSF Workshop on GENI in Education

Jeannie Albrecht, Jay Aikat, Kevin Jeffay

(Thanks to Vic Thomas, Sarah Edwards, Niky Riga)





Goals and Agenda for this Workshop

- Encourage use of GENI in undergraduate and graduate classes
- 30 participants – small and large schools
- Keynote by Jim Kurose
- Intro and Practical Advice on using GENI in the classroom
- Current uses of GENI in the classroom, and SOL4 projects





Outcome of the Workshop

- Excellent discussions on the pros and cons of hands-on labs in classes
- Clear guidelines for GENI in classroom
- Spontaneous collaboration among interested educators and projects providing content and tools for using GENI in the classroom
- Feedback was excellent; will do follow-up in GEC 19

