

GENI Rack Operations Going Forward

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Main O&M Tasks

- Software updates
- Fixing slices, nodes, etc. that go wrong
- Status (eg up/down) monitoring, testing
- Slice-aware infrastructure monitoring
- User tracking, usage forecasting

Software Updates

- InstaGENI racks update every Friday at 6 Eastern
- Most IG updates not noticable to users
- ExoGENI major releases twice per year
- EG bugfix releases on an as-needed basis
- Communicated via GMOC tickets

Fixing the Infrastructure

- Rebooting wedged nodes
- Fixing stuck slices and slivers
- Troubleshooting interfaces with:
 - Campus, regionals, dynamic circuit services
- Handling special resource requests

Status Monitoring

<https://fed4fire-testbeds.ilabt.iminds.be/scenarios.php>

<http://monitor.gpolab.bbn.com/nagios/cgi-bin/status.cgi>

jFed Automated Scenario Tests

Options: [Show code tag](#)

Test Name	Last Test Start Time (CET)	Last Test Duration	Last Partial Success	Last Full Success	Time since last Failure	Last Log	History
InstaGeni BBN	2013-10-28 12:13:08	2 minutes and 33 seconds	SUCCESS	SUCCESS	1 day and 4 hours	log	history
InstaGeni Clemson	2013-10-28 12:15:41	35 seconds	FAILURE	FAILURE		log	history
InstaGeni GATech	2013-10-28 12:16:16	31 seconds	FAILURE	FAILURE		log	history
InstaGeni Illinois	2013-10-28 12:16:47	2 minutes and 50 seconds	SUCCESS	SUCCESS	14 days and 4 hours	log	history
InstaGeni Kettering	2013-10-28 12:19:37	2 minutes and 8 seconds	SUCCESS	SUCCESS	4 days and 4 hours	log	history
InstaGeni MAX	2013-10-28 12:21:45	2 minutes and 44 seconds	SUCCESS	SUCCESS	14 days and 4 hours	log	history
InstaGeni Missouri	2013-10-28 12:24:29	39 seconds	FAILURE	FAILURE		log	history
InstaGeni NorthWestern	2013-10-28 12:25:09	2 minutes and 31 seconds	SUCCESS	SUCCESS	6 days and 4 hours	log	history
InstaGeni NYSERNET	2013-10-28 12:27:40	2 minutes and 12 seconds	SUCCESS	SUCCESS	2 days and 16 hours	log	history
InstaGeni Princeton	2013-10-28 12:29:52	2 minutes and 23 seconds	SUCCESS	SUCCESS	(16 days and 16 hours)	log	history
InstaGeni SOXAtlanta	2013-10-28 12:32:15	2 minutes and 15 seconds	SUCCESS	SUCCESS	11 days and 4 hours	log	history
InstaGeni Uky	2013-10-28 12:34:31	2 minutes and 36 seconds	SUCCESS	SUCCESS	6 days and 4 hours	log	history
InstaGeni Utah DDC	2013-10-28 12:37:07	2 minutes and 20 seconds	SUCCESS	SUCCESS	(10 days and 4 hours)	log	history
LARC	2013-10-28 12:39:27	2 minutes and 17 seconds	SUCCESS	SUCCESS	(16 days and 16 hours)	log	history
ORCA ExoGeni BBN	2013-10-28 12:42:17	2 minutes and 31 seconds	SUCCESS	SUCCESS	6 days and 4 hours	log	history
ORCA ExoGeni Duke	2013-10-28 12:44:48	1 minute and 57 seconds	SUCCESS	SUCCESS	6 days and 16 hours	log	history
ORCA ExoGeni ExoSM	2013-10-28 12:46:45	2 minutes and 13 seconds	SUCCESS	SUCCESS	6 days and 16 hours	log	history
ORCA ExoGeni FIU	2013-10-28 12:48:58	2 minutes and 34 seconds	SUCCESS	SUCCESS	6 days and 14 hours	log	history
ORCA ExoGeni		2 minutes and 47					

jFed Automated Scenario Tests

Options: [Show code tag](#)

Category	Test Name	Test Start Time	Test Duration	Partial Success	Full Success	Log
login	Nodelogin InstaGeni Missouri	2013-10-17 09:20:45	15 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-17 13:50:05	2 minutes and 22 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-17 21:24:05	2 minutes and 19 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-18 09:27:08	2 minutes and 26 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-18 21:20:09	2 minutes and 19 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-19 09:21:08	2 minutes and 26 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-19 21:21:04	2 minutes and 40 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-20 09:23:45	2 minutes and 23 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-20 21:29:45	2 minutes and 21 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-21 02:03:12	2 minutes and 18 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-21 09:28:00	1 minute and 57 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-21 21:21:11	2 minutes and 20 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-21 23:02:59	2 minutes and 21 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-22 07:57:31	2 minutes and 12 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-22 09:28:01	2 minutes and 20 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-22 17:52:49	2 minutes and 20 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-22 21:24:01	2 minutes and 20 seconds	SUCCESS	SUCCESS	log
login	Nodelogin InstaGeni Missouri	2013-10-23 09:24:29	37 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-23 21:24:25	40 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-24 09:19:16	35 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-24 21:23:12	37 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-25 09:23:07	41 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-25 21:24:34	38 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-26 09:19:20	36 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-26 21:22:44	36 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-27 09:21:12	38 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-27 21:21:29	40 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-28 09:20:29	37 seconds	FAILURE	FAILURE	log
login	Nodelogin InstaGeni Missouri	2013-10-28 12:24:29	39 seconds	FAILURE	FAILURE	log

Note: Full success means the test ran without errors. For some tests, partial success is defined. This means that the test was mostly succesfull, but at least one part failed. The requirement to be partially successfull is defined per catagory. For both the login and stitching category, partial failure requires that swapi succeeds and the status becomes ready, but ping may fail.

Current Network Status

Last Updated: Mon Oct 28 13:30:50 EDT 2013
Updated every 30 seconds
Nagios® Core™ 3.2.3 - www.nagios.org
Logged in as gpoguest

[View History For all hosts](#)[View Notifications For All Hosts](#)[View Host Status Detail For All Hosts](#)

Host Status Totals

Up	Down	Unreachable	Pending
281	0	0	0

All Problems All Types

0	281
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Service Status Totals

Ok	Warning	Unknown	Critical	Pending
1701	1	0	18	0

All Problems All Types

19	1720
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Service Status Details For All Hosts

Host ↑↓	Service ↑↓	Status ↑↓	Last Check ↑↓	Duration ↑↓	Attempt ↑↓	Status Information
TANGO-bbn-hn.exogeni.gpolab.bbn.com	foam_am_getversion	OK	10-28-2013 13:29:04	50d 18h 16m 46s	1/3	CHECKGENIAMAPI OK: Check succeeded
	foam_am_listresources_emulab	OK	10-28-2013 12:12:27	4d 13h 18m 23s	1/3	CHECKGENIAMAPI OK: Check succeeded
	foam_am_listresources_genich	OK	10-28-2013 12:22:36	33d 3h 8m 14s	1/3	CHECKGENIAMAPI OK: Check succeeded
	foam_am_listresources_pg	OK	10-28-2013 11:42:19	88d 19h 48m 31s	1/3	CHECKGENIAMAPI OK: Check succeeded
	foam_am_listresources_plc	OK	10-28-2013 11:43:48	38d 17h 47m 7s	1/3	CHECKGENIAMAPI OK: Check succeeded
	foam_am_resource_count_gmoc-prod	OK	10-28-2013 13:03:01	58d 21h 59m 10s	1/3	Aggregate reported 1 resource
	foam_am_sliver_count_gmoc-prod	OK	10-28-2013 13:03:01	4d 20h 36m 38s	1/3	6 slivers reported by aggregate
	foam_am_sliver_expirations_gmoc-prod	OK	10-28-2013 13:03:01	3d 20h 2m 48s	1/3	All slivers at this AM expire before the corresponding slices
	foam_am_unknown_users_gmoc-prod	OK	10-28-2013 13:03:01	58d 21h 59m 10s	1/3	All slivers have known creators
	foam_am_version_gmoc-prod	OK	10-28-2013 13:03:01	32d 22h 28m 48s	1/3	Versions foam-0.12.3,flowvisor-0.8.1 are in the GENI expected set
	foam_fv_datapaths_gmoc-prod	OK	10-28-2013 13:21:02	49d 18h 48m 49s	1/3	FV datapath count: 1
	foam_gmoc_relations_gmoc-prod	OK	10-28-2013 13:03:01	32d 23h 31m 48s	1/3	bbn-hn.exogeni.gpolab.bbn.com foam has reported recently
	foam_native_fv_slices_gmoc-prod	OK	10-28-2013 13:21:02	58d 22h 2m 49s	1/3	No unexpected native FV slices
	gmoc_measurements_gmoc-prod	OK	10-28-2013 13:21:02	40d 20h 34m 48s	1/3	bbn-hn.exogeni.gpolab.bbn.com has reported recently
TANGO-bbn-hn.exogeni.net	orca_am_getversion	OK	10-28-2013 13:27:31	20d 14h 3m 19s	1/3	CHECKGENIAMAPI OK: Check succeeded
	orca_am_listresources_emulab	OK	10-28-2013 12:17:47	3d 13h 13m 3s	1/3	CHECKGENIAMAPI OK: Check succeeded
	orca_am_listresources_genich	OK	10-28-2013 11:34:36	36d 17h 56m 14s	1/3	CHECKGENIAMAPI OK: Check succeeded
	orca_am_listresources_pg	OK	10-28-2013 11:47:34	20d 13h 58m 23s	1/3	CHECKGENIAMAPI OK: Check succeeded
	orca_am_listresources_plc	OK	10-28-2013 11:34:01	38d 17h 56m 49s	1/3	CHECKGENIAMAPI OK: Check succeeded
	orca_am_resource_count_gmoc-prod	OK	10-28-2013 13:03:01	51d 21h 6m 48s	1/3	Aggregate reported 8 resources
	orca_am_sliver_count_gmoc-prod	OK	10-28-2013 13:03:01	1d 18h 38m 48s	1/3	7 slivers reported by aggregate
	orca_am_sliver_expirations_gmoc-prod	WARNING	10-28-2013 13:03:01	1d 18h 38m 48s	3/3	Some slivers expire after slice expiration time: urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+834532a1-be69-408e-a9e1-fa3bde250187:nodeB (1383509353 > 1383491353), urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+f981e067-d0c4-4783-bf47-fb68543ec3bc:nodeA (1383509288 > 1383491288), urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+2231bb3a-ae1c-4852-b72e-9b2d63e46f63:nodeD (1383509235 > 1383491235), urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+18223cf6-64dc-4629-b01a-00f9151c9ac5:nodeE (1383509123 > 1383491123), urn:publicid:IDN+exogeni.net+sliver+4904fb4f-bc2c-4449-b8e6-238eb1b2af77:nodeE (1383509831 > 1383491831), urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+d108fc79-22c5-4e63-aac9-cd783cb93dbb:client (1383627599 > 1383609599), urn:publicid:IDN+exogeni.net:bbnvm-site+sliver+8198badc-7e7e-4563-98cd-cc85d9553dc2:nodeE (1383518504 > 1383500504)
	orca_am_unknown_users_gmoc-prod	OK	10-28-2013 13:03:01	58d 21h 59m 10s	1/3	All slivers have known creators
	orca_gmoc_relations_gmoc-prod	OK	10-28-2013 13:03:01	32d 23h 52m 48s	1/3	bbn-hn.exogeni.net orca has reported recently
TANGO-ch.geni.net	ch_getusercred	OK	10-28-2013 13:21:09	3d 17h 39m 41s	1/3	CHECKGENICHAPI OK: Check succeeded
	ch_getversion	OK	10-28-2013 13:28:03	3d 17h 42m 47s	1/3	CHECKGENICHAPI OK: Check succeeded

Service Information
Last Updated: Mon Oct 28 13:31:06 EDT 2013
Updated every 30 seconds
Nagios® Core™ 3.2.3 - www.nagios.org
Logged in as gpoguest

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Service
gmoc_measurements_grnoc-prod
On Host
TANGO-foam.cenic.net
(TANGO-foam.cenic.net)

Member of
[gmoc-metrics](#)

foam.cenic.net

This service checks whether a host is reporting any data to gmoc-prod via GMOC's measurement API. It is checked by a process which downloads and parses all recent GMOC measurement data.

Service State Information

Current Status:	OK (for 12d 7h 25m 4s)
Status Information:	foam.cenic.net has reported recently
Performance Data:	
Current Attempt:	1/3 (HARD state)
Last Check Time:	10-28-2013 13:21:02
Check Type:	PASSIVE
Check Latency / Duration:	N/A / 0.000 seconds
Next Scheduled Check:	N/A
Last State Change:	10-16-2013 06:06:02
Last Notification:	N/A (notification 0)
Is This Service Flapping?	NO (0.00% state change)
In Scheduled Downtime?	NO
Last Update:	10-28-2013 13:30:58 (0d 0h 0m 8s ago)

Active Checks:	DISABLED
Passive Checks:	ENABLED
Obsessing:	ENABLED
Notifications:	ENABLED
Event Handler:	ENABLED
Flap Detection:	ENABLED

Service Commands

Your account does not have permissions to execute commands.

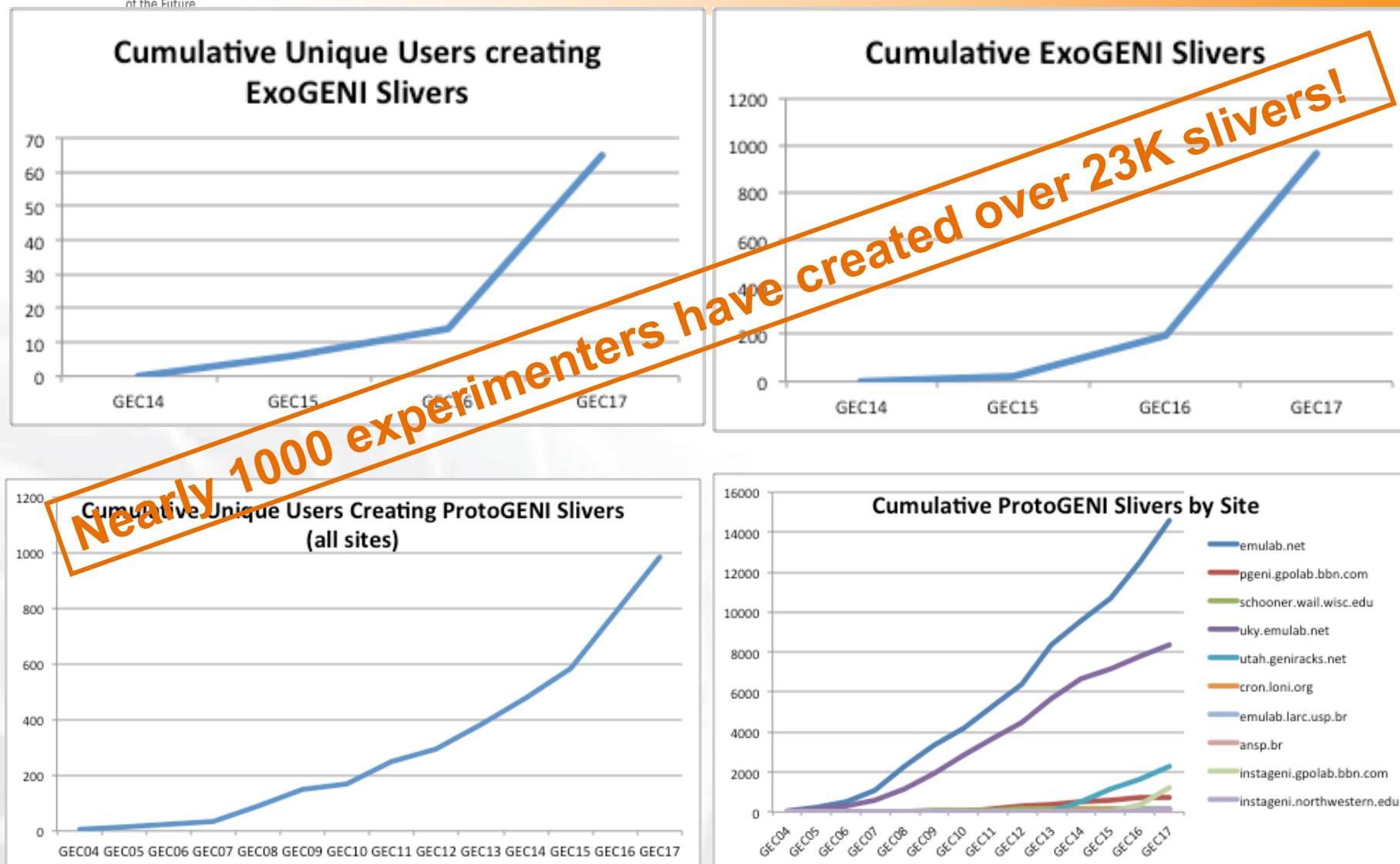
Slice-Aware Monitoring

- Work to do here
- Use tools like Nagios
- Ingest GENI manifests, advertisements, etc.
- Associate resource usage with active slices
- With history

User Tracking

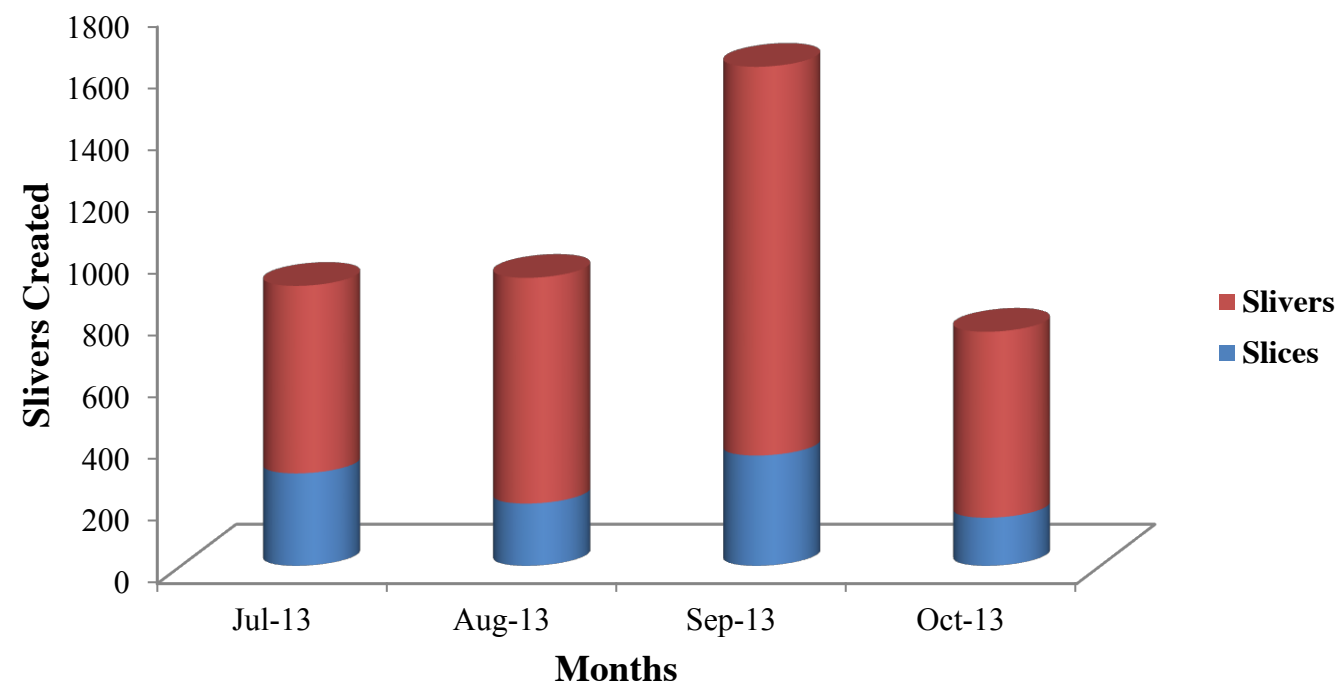


The Number of Experimenters Continues to Grow!



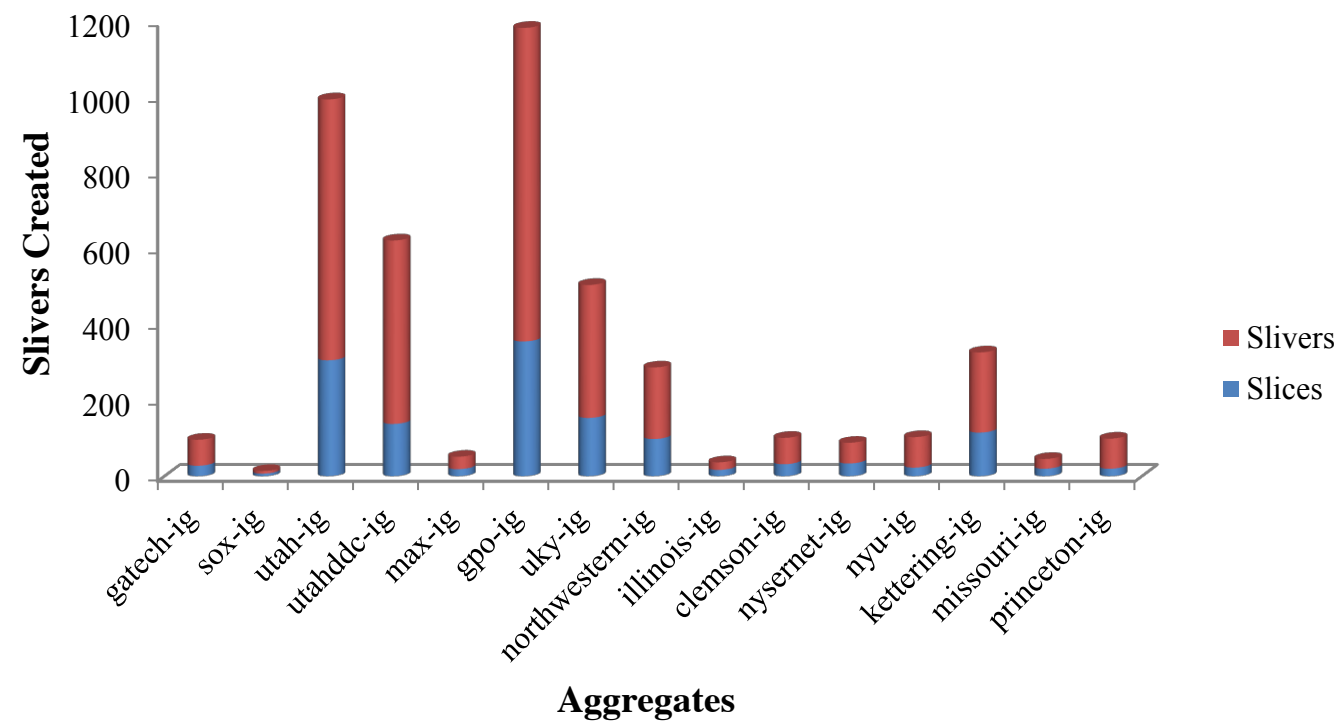
User Tracking

Slivers Created Per Month From July 2013 to October 2013



User Tracking

Slivers Created Per Aggregate From
July 2013 to October 2013



User Tracking

Users with Slivers at Each Aggregate From
July 2013 to October 2013

