



GENI Meta-Operations Center Post-GEC15 Report

10/23/2012-03/19/2013

Jon-Paul Herron – Principal Investigator

Luke Fowler – Co-Principal Investigator

Summary

- *Operating within Budget*
- *On track to complete milestones as planned*
- *Expanded client support for data submission*
- *Support for mesoscale stitching*
- *Migration of ExoGENI and InstaGENI to new code*
- *Partial data submission*
- *UI bug fixes*

Major Accomplishments

Milestones Achieved

Expanded Client Support – the data submission client was rewritten in Python (called *GMOC Objects*) and encompasses all of the features of the original client as well as the ability to validate data before it is sent to the GMOC data submission backend.

Support for Mesoscale Stitching – the new Python client includes the same support for circuits as the Perl client, and adds additional support for the concept of stitching, in the form of objects that represent regional networks and circuits.



Partial data submission – the *GMOC Objects* API supports data submission when not all data is available, which was previously not available in the *Perl ExchangeAPI* client.

ExoGENI and InstaGENI Migration – ExoGENI and InstaGENI code was upgraded to use the new Python data submission client.

UI Bug Fixes – several bugs were fixed in the GMOC user interface.

Project Participants

During this time, key participants in GMOC included:

Jon-Paul Herron, PI
Luke Fowler, Co-PI
Kevin Bohan, Senior GMOC Engineer
Mitch McCracken, Senior GMOC Engineer

Collaborations

GMOC has continued the process of working with exemplar projects regarding data acquisition.

PlanetLab – GMOC has continued data collection from PlanetLab’s CoMon interface and into the GMOC database.

ExoGENI – GMOC has started collecting data from ExoGENI using the *GMOC Objects* (Python) API.

InstaGENI – GMOC has started collecting data from InstaGENI using the *GMOC Objects* API.

OpenFlow at Indiana University – GMOC has continued data collection from Indiana University’s OpenFlow switches using SNAPP.

OpenFlow at Internet2 – GMOC has continued data collection from the Internet2 Network’s OpenFlow switches using SNAPP and metadata from the Internet2 aggregate manager using the *GMOC Objects* API.

OpenFlow At National LambdaRail – GMOC has continued data collection from the National LambdaRail OpenFlow switches using SNAPP.



Planned Activities for period before GEC16

Supporting *data download* (the ability to query GMOC data from the *GMOC Objects* API client), an operational status map of GENI mesoscale topology, expanded support for resource status monitoring, and a partially rewritten backend to optimize the data submission service for increased deployment of ExoGENI and InstaGENI racks.

Continue refining procedures for Emergency Stop. Continue to build the operational contact database.

Work with GPO and other members of the GENI Operations Team to integrate additional data into the GMOC data set.