GENI Meta-Operations Center Service Desk

Project Status Report

Spiral 5, Post GEC16

Period: 11/01/2012-02/31/2013

Marianne Chitwood – Principal Investigator

Summary

- *Operating within Budget*
- *Completed all remaining Service Desk Statement of Work milestones; waiting for new*
- *Continuing to work on any remaining items for improving support*
- *Implemented workflows for GENI Racks*
- *Completed Emergency Stop dry runs with GPO and GENI Racks teams*
- *Established a strong procedure for GENI Aggregates Turn-up*

Major Accomplishments

Milestones Achieved

- **S4.g** *Complete revisions of processes and documentation and begin production operation of support desk. Plan to report on efforts and successes at subsequent GECs. (August, 2012)*

Continued training for the Service Desk staff of GMOC tools and current support – Emergency Stop, GENI Integrated Backbone Outages/Maintenances, I2/NLR/Indiana/MOXI FOAM workflow, Disruptive Experiments Reservation and Maintenance Freeze workflows, GMOC Database training, GENI Racks Outage/Maintenance tracking, etc…

Service Desk has established a strong and streamlined process for turning up GENI Aggregates and presented at the GEC16 Demo Session. Service Desk continues to work with upcoming Regionals and GENI Racks to setup operational/Emergency Stop contacts in the GMOC database for Aggregates and making sure they're sending data to GMOC via a more stream-lined GENI Aggregate GMOC Turn-up Process. Additionally GMOC SD has included bi-weekly GENI Network status report for GENI Racks in addition to Backbone and Regionals.

GMOC Service Desk worked with GMOC Dev project software engineers and the GPO to clean-up existing contacts and organizations in the GMOC-DB as well as introduce many UI and functionality changes to improve overall usability of the GMOC tools for support and Emergency Stop workflows for upcoming GENI Racks.

Deliverables Made

- GENI support processes and documentation updates and improvements
- Continued event tracking support of GENI Racks
- Completed database UI and functionality updates with operational aggregate contacts
- Solidified a streamlined GENI Aggregate GMOC Turn-up Process.
- Completed GENI Racks Emergency Stop tests.

Description of Work Performed During Last Quarter

Activities and Findings

The GMOC Service Desk has continued to operate in full operational mode by providing following areas of support for the GENI Community:

- **GENI Emergency Stop:** Service Desk worked with GPO pre-GEC16 to perform Emergency Stop dry run tests with the GENI Racks teams (InstaGENI and ExoGENI).
- GMOC has continued with training for Service Desk staff to be better prepared on the 24x7 basis and further development of tools that may help in quicker response to Emergency Stop requests and other instabilities and outages in the GENI Infrastructure.
- **GENI Integrated OpenFlow Backbone network support:** GMOC Service Desk continues to streamline processes and procedures to provide 24/7 monitoring and MOC Service Desk support for operational issues on the GENI OpenFlow Backbone. GMOC is working with NLR

towards better monitoring and visibility into the NLR OpenFlow Backbone.

- **GENI Operations Mailing list and improved notifications:** GMOC continues to provide notifications for the GENI community via the GENI Ops mailing list (GENI-Ops@grnoc.iu.edu). Monthly reminders continue to be sent to the experimenters@geni.net mailing list to invite interested experimenters to the list and update on any other GMOC developments and to point GENI users towards GMOC Operations Calendars and other tools GMOC provides for presenting the health of the GENI Infrastructure.

- **Disruptive Experiments Reservation Workflow:** GMOC Service Desk with GPO coordination continues to provide a workflow to handle approval and reservations for potentially disruptive experiments that may negatively affect the GENI OpenFlow Mesoscale VLANs and other GENI resources that are being used by other experimenters across GENI. GMOC approves and posts such events on the GMOC Operations Calendars and notifies the GENI community of reservations for any potentially disruptive experiments that are reported to the GMOC.

  GMOC is also working towards implementing post-mortem review of unexpected disruptive events on GENI during various events such as Demos or Disruptive Experiment Reservations. GMOC SST will work with GPO and others in the GENI community to review FlowVisor outages and instabilities as well as other unexpected disruptions via GMOC monitoring and measurement tools.

- **Regionals Turn-up Workflow:** GMOC Service Desk, Network Engineering groups in coordination with GPO continue to connect GENI Regionals to the GENI OpenFlow Core by tracking turn-ups by following the GENI Aggregate GMOC Turn-up Process, as well as engaging appropriate network and systems engineering groups to help troubleshoot any problems with connecting a GENI Regional to the Core backbone.

Project Participants

During this time, key participants in GMOC Service Desk included:

- Marianne Chitwood, PI
- Eldar Urumbaev, GENI SST
- Adam Williamson, GRNOC Service Desk Supervisor
- John Wilson, GRNOC Project Management Team Representative

Outreach Activities

GMOC web site: GENI GMOC web site is continuing to be updated to provide up-to-date information on GENI Service Desk support including ticketing system, documents, tools and operations calendars. Eldar Urumbaev presented about updates at GEC16 during the Operations and Monitoring session.

Collaborations

GMOC Service Desk continued work with Internet2 and NLR NOCs to provide an "umbrella" support for the GENI Integrated Backbone. GMOC Service Desk representatives continue to join the bi-weekly Regionals call as well as continuing representation on the Friday weekly calls with GPO: Network-Core and Monitoring – providing GENI Ops agenda items and operational status report via a bi-weekly report as well as discuss any other operational items going forward. During GEC16 Service Desk representatives focused on generating discussion for future support of GENI as the infrastructure grows; needs and challenges such as targeted notifications, topology, circuits and nodes, pro-active monitoring and others.

Planned Activities for Spiral 5

GMOC Service Desk will continue to provide existing support as well as reach out into new areas of improved support including:

- Work on improving overall visibility and reporting in GENI.
  1. Transitioning GENI Core monitoring to GMOC.
  2. Other pro-active monitoring.
  3. Improved Emergency Stop contacts UI presentation in the GMOC-DB.
  4. Circuits and nodes representation in the GMOC-DB and SNAPP.
  5. Plan for targeted notifications.
- Continue to keep current the GMOC website home page and the GENI Meta Ops page on GENI Wiki to include current support features for experimenters and the GENI community as a whole.