



GENI Meta-Operations Center Service Desk

Project Status Report

Spiral 5, Post GEC19

Period: 11/01/2013-03/31/2014

Marianne Chitwood – Principal Investigator

Summary

- *Operating within Budget*
- *Completed all remaining Service Desk Statement of Work milestones*
- *Continuing to work on current and consistently improving support for the GENI Community*
- *Performed an LLR Request Exercise with InstaGENI*
- *Continuing GENI Racks and Regionals turn-ups*

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 24/7 staff and Co-SST (Vince Neil) of GMOC tools and current support – Emergency Stop, GENI Integrated Backbone Outages/Maintenances, I2/Indiana/MOXI FOAM workflow, Disruptive Experiments Reservation and Maintenance Freeze workflows, GMOC Database training, GENI Racks Outage/Maintenance tracking, etc...



Service Desk performed another GENI LLR Request exercise; this time with actual 3rd party – Utah InstaGENI. Service Desk continues to work with upcoming Regionals and GENI Racks to setup Emergency Stop contacts in the GMOC database for Aggregates and making sure they're sending data to GMOC and other operational-ready tasks via a stream-lined [GENI Aggregate GMOC Turn-up Process](#).

Deliverables Made

- GENI support processes and documentation updates and improvements
- Continued event tracking support of GENI Racks
- Continued database UI and functionality updates for Emergency Stop and LLR Process
- Continued to provide turn-up for GENI Racks and other aggregates via the [GENI Aggregate GMOC Turn-up Process](#).
- Performed LLR Exercise with a 3rd party – Utah InstaGENI.

Description of Work Performed During Last Quarter

Activities and Findings

The GMOC Service Desk continues to operate by providing following areas of support for the GENI Community:

- **GENI Emergency Stop:** GMOC continues to maintain operational list of Emergency Stop contacts for all GENI Aggregates and the process for performing an Emergency Stop.
- **GENI LLR Request Exercise with InstaGENI:** GMOC along with currently designated GENI LLR representative, Stephen Schwab, a GPO representative, Josh Smift and Utah, InstaGENI admin, conducted an exercise of an LLR Request test scenario based on the GMOC's LLR Request Process - [GENI LLR Procedure Workflow](#).

The finding of the exercise confirm that the over-all GMOC LLR Request Process works with 3rd party, such as an Aggregate Operator, however further tools development is needed and assuring proper data is submitted into the GMOC-DB in order to be able to find GENI resources and parties responsible for them. It remains clear that historical data of GENI resources linked to their slice owners, etc... is needed to properly handle the LLR requests as slices expire and often LLR requests can often come in with significant delay and it would be

difficult to track an offending party/entity if slice ownership has change/expired. Related to this, it is also important for GENI to determine a policy of how long historical data is kept. Without this policy, GENI can be at risk of having LLR requests to look up and turn over arbitrary amounts past data. GPO should think about incorporating this as a policy going forward and as operational monitoring architecture is developed.

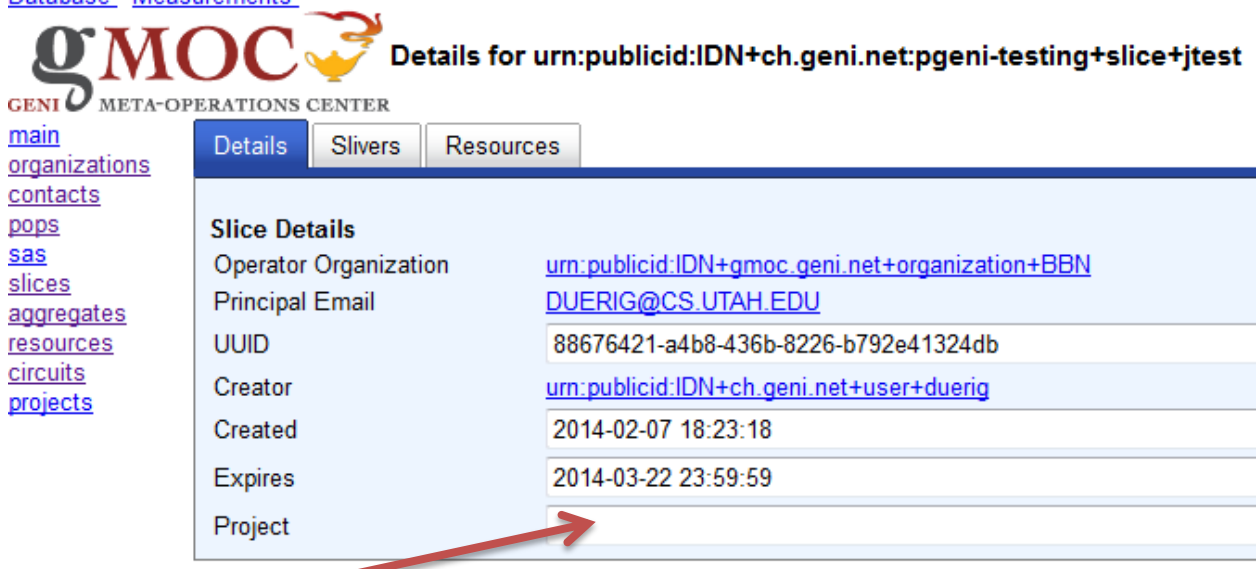
GMOC will continue to schedule LLR test that will include GENI infrastructure and test the tools and ability of LLR representative(s) to find what they need in GENI. This time we relied on the Utah Slice authority to find information.

During the exercise it was determined that InstaGENI has 3 levels of reaction (Panic buttons):

- Panic Level 1 - Reboots host into NFS - (Admin state)
- Panic Level 2 - Power down node- same, but creates firewall rules
- Panic Level 3 - Remove NODE

GMOC-DB now has built-in functionality for looking up Project Owner as well as slice owner contact information, however Clearing House and Slice Authorities will need to begin sending this data to GMOC.

[Database](#) [Measurements](#)



gMOC GENI META-OPERATIONS CENTER

Details for urn:publicid:IDN+ch.geni.net:p geni-testing+slice+jtest

[main](#)
[organizations](#)
[contacts](#)
[pops](#)
[sas](#)
[slices](#)
[aggregates](#)
[resources](#)
[circuits](#)
[projects](#)

Details Slivers Resources

Slice Details	
Operator Organization	urn:publicid:IDN+gmoc.geni.net+organization+BBN
Principal Email	DUERIG@CS.UTAH.EDU
UUID	88676421-a4b8-436b-8226-b792e41324db
Creator	urn:publicid:IDN+ch.geni.net+user+duerig
Created	2014-02-07 18:23:18
Expires	2014-03-22 23:59:59
Project	

Next time GMOC plans to do a test with multi-site involvement - Rack admin and Slice Authority. We will also perform a test with ExoGENI.

It was also determined that it would be useful to develop and improve LLR communications during an even. GMOC can provide an ad-hoc phone bridge upon request. It may prove



useful to also have a chat room or IRC channel for communication. LLR Representative and Operators should have an active IRC account and be able to log and either use existing GENI IRC channels as needed.

It is also important to make sure LLR representative has consistent access to the GMOC-DB, GMOC ticketing systems and other GENI tools. It's also important to plan for Operators to maintain Operator level of access to GMOC data in order to look up data as needed and not have to worry about setting up their proper access during an emergency or LLR event. An SSL-based approach for authorization seems to be the way to go and ensure there's authorization method built-in for dynamically identifying and operator without a need to manually manage their Operator-level of access to see slice/contact data, etc...

GMOC will continue to make sure LLR is well represented as one of the Operational Monitoring use cases and tools and data is available to support LLR and Emergency stop as operational monitoring efforts progress.

GENI Integrated OpenFlow Backbone network support update: GMOC Service Desk worked with GPO network engineers to transition NLR Core resources to Internet2 during the pending shut-down of NLR.

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 GMOC updates at GEC19 during the GENI Operations session. GMOC continues to collaborate with the GENI Rack teams, Regionals and Operational Monitoring project representatives to help in GENI's transition to Operations.



Collaborations

GMOC continues to collaborate with the GENI Rack teams, Regionals and Operational Monitoring project representatives to help in GENI's transition to Operations.

Planned Activities for Spiral 5

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

- Work on improving overall visibility and reporting in GENI by taking active role in operational monitoring efforts and development.
 1. Continue performing LLR Requests dry-runs.
 2. GMOC-DB UI and schema supporting LLR requests by easily identifying GENI resources. Making sure all Campuses are sending IP data to GMOC and GMOC is able to lookup Project Owner data from Clearing House and Slice Authorities.
 3. Continue to feed monitoring use-cases for future GENI Operations.
- 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.