GMOC Service Desk Support

GMOC Experimenter Support Proposal
GEC13 - 2012
Existing GMOC Service Desk Support Description and Overview

Currently the GMOC Service Desk provides the following support for the GENI community.

Ticketing System and Tools:

- Public Ticket Viewer – view public ticket for Unscheduled Outages, Scheduled Maintenances and Problem/Request ticket types.
- Operations Calendars (Web, iCal, RSS) – Calendars to view all Unscheduled Outages and Scheduled Maintenances (past, current and future).
- [https://gmoc.grnoc.iu.edu/gmoc/index/support.html](https://gmoc.grnoc.iu.edu/gmoc/index/support.html)
- **Public Ticket Viewer** – currently open tickets

![GlobalNOC and Ticketing Tools Logo](image)

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**Ticket Viewer**

*Operations Calendars | Notification Tool | Public Ticket Viewer | Reporting Tool | Administration | Help*

<table>
<thead>
<tr>
<th>Ticket Information:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number</strong></td>
<td>115</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td>GENI NLR OpenFlow Backbone Circuit ATLA-SUNN Maintenance</td>
</tr>
<tr>
<td><strong>Contact Name</strong></td>
<td>GMOC NOC</td>
</tr>
<tr>
<td><strong>Contact Organization</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Source of Impact:</strong></td>
<td>Vendor</td>
</tr>
<tr>
<td><strong>Scheduled Start Time:</strong></td>
<td>Friday, March 30, 2012, 5:00 AM (0500) UTC</td>
</tr>
<tr>
<td><strong>Scheduled End Time:</strong></td>
<td>Friday, March 30, 2012, 11:00 AM (1100) UTC</td>
</tr>
<tr>
<td><strong>Ticket Status</strong></td>
<td>Vendor</td>
</tr>
<tr>
<td><strong>Ticket Type</strong></td>
<td>Scheduled Maintenance</td>
</tr>
<tr>
<td><strong>Affected</strong></td>
<td>NLR OpenFlow Backbone Circuit ATLA-SUNN</td>
</tr>
<tr>
<td></td>
<td>NLR-ATLA-SUNN-10GE-07718</td>
</tr>
<tr>
<td><strong>Summary of Current Status</strong></td>
<td>The above listed will be unavailable while Level(3) Communications performs maintenance to relocate fiber due to Texas DOT Mandate. A one hour outage is expected, however the entire maintenance window has been reserved.</td>
</tr>
</tbody>
</table>

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![GMOC and GENI Meta-Operations Center Logo](image)
• Operations Calendars (Web, iCal, RSS)

<table>
<thead>
<tr>
<th>March 2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday</td>
</tr>
<tr>
<td>26</td>
</tr>
<tr>
<td>4</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>18</td>
</tr>
<tr>
<td>25</td>
</tr>
</tbody>
</table>

GMOC - Unscheduled Outage - Mozilla Firefox

114 GENI NLR OpenFlow Backbone Circuit CHIC-DENV Instability Resolved - (7:37 PM - 10:00 PM)

AFFECTED: GENI NLR OpenFlow Backbone Circuit CHIC-DENV NLR-CHIC-DENV-106E-07719

START TIME: Wednesday, March 7, 2012, 7:37 PM (1937) UTC
END TIME: Wednesday, March 7, 2012, 10:00 PM (2200) UTC

DESCRIPTION: Above affected OpenFlow Backbone Circuit is currently stable. Vendor NLR Engineers worked with Level(3) technicians to replace a failing transponder in Chicago. Stability has resumed.

TICKET NO.: 114:126
TIMESTAMP: Fri Mar 9 20:01:06 2012 UTC
Existing GMOC Service Desk Support Description and Overview – Cont...

- **Notification Tool** – notification tool to send community notifications based on GMOC tickets for service affecting events on the GENI OpenFlow Integrated Backbone. Currently following lists are included in the Notification Tool: network-core@geni.net, response-team@geni.net. I2/NLR GENI OpenFlow Backbone circuits and Core Nodes outages/maintenances. Notifications are also sent at the request of the GMOC Engineering groups and GPO.
• Notification Tool

Notifications
To: response-team@geni.net, network-core@geni.net
From: GENI Meta Operations Center
Subject: GENI NLR OpenFlow Backbone Circuit ATLA-SUNN Maintenance ISSUE=115 PROJ=126

SUBJECT: GENI NLR OpenFlow Backbone Circuit ATLA-SUNN Maintenance
AFFECTED: NLR OpenFlow Backbone Circuit ATLA-SUNN

SCHEDULED START TIME: Friday, March 30, 2012, 5:00 AM (0500) UTC
SCHEDULED END TIME: Friday, March 30, 2012, 11:00 AM (1100) UTC
DESCRIPTION: The above listed will be unavailable while Level(3) Communications performs maintenance to relocate fiber due to Texas DOT Mandate. A one hour outage is expected, however the entire maintenance window has been reserved.

TICKET NO.: 115:126
TIMESTAMP: Fri Mar 09 20:19:50 2012 UTC

Message ID: gmoc.115.2.1
Thank You,
GENI Meta Operations Center
Indiana University
gmoc@grnoc.iu.edu, 317-274-7783
Visit the GMOC Home Page at http://gmoc.grnoc.iu.edu/
• **GENI Resource Approval/Inquiry form** - form to allow experimenters to submit approval requests or inquiries with all pertinent information required to approve a slice/sliver in the FOAM Aggregate Manager on I2/NLR FlowVisors
  - automatically creates a GMOC ticket
  - Sent to GMOC Systems Engineering
  - May not be needed because of FOAM notifications and workflow?
  - [http://gmoc.grnoc.iu.edu/gmoc/index/support.html](http://gmoc.grnoc.iu.edu/gmoc/index/support.html)
Existing GMOC Service Desk Support Description and Overview – Cont...

- Internet2/NLR/Indiana FOAM Workflow
  - FOAM events emails sent to GMOC Alerts inbox – monitored 24/7.
  - Initial Sliver creation FOAM emails auto-generate a Systems Support ticket and Round Robin to a Systems engineer.
  - GMOC Service Desk can look up status of a resource approval at any time.
Existing GMOC Service Desk Support
Description and Overview – Cont...

Pro-Active Monitoring

• GPO Nagios Alarms – sent to GMOC Alerts and monitored by GMOC Service Desk staff 24x7x365
• Internet2 and NLR Alarms – seen by Internet2 and NLR NOCs, but now also easily identifiable and send individually to the GMOC Alerts inbox.
• Systems Alarms – I2/NLR/Indiana OpenFlow Controllers (some monitored services: FlowVisor, Disk, Load, NTP, SWAP)
Existing GMOC Service Desk Support Description and Overview – Cont...

Escalation Matrix
Matrix for the GMOC Service Desk to follow for notifying GRNOC Managers, Senior GRNOC Engineers and GPO representatives on events of various priorities that go unresolved for particular time periods.
## Escalation Matrix

<table>
<thead>
<tr>
<th>Contact</th>
<th>1-Critical</th>
<th>2-High</th>
<th>3-Elevated</th>
<th>4-Normal</th>
</tr>
</thead>
<tbody>
<tr>
<td>GRNOC Round-Robin or On-Call Engineer</td>
<td>Immediate, by normal process</td>
<td>Immediate, by normal process</td>
<td>Immediate, by normal process</td>
<td>Immediate, by normal process</td>
</tr>
<tr>
<td>Service Desk Supervisor or Lead Tech (on duty)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Desk Supervisor On-Call</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GPO (GENI Project Office) <a href="mailto:gpo-infra@geni.net">gpo-infra@geni.net</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tom Johnson GMOC NPT <a href="mailto:wtjohnson@grnoc.iu.edu">wtjohnson@grnoc.iu.edu</a></td>
<td>1 hour</td>
<td>4 hours</td>
<td>1 day</td>
<td>30 days</td>
</tr>
<tr>
<td>Mike Booher Service Desk Manager <a href="mailto:mbooher@iupui.edu">mbooher@iupui.edu</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jay Duncan Network Engineering Team Manager <a href="mailto:jrduncan@grnoc.iu.edu">jrduncan@grnoc.iu.edu</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tom Johnson GMOC NPT <a href="mailto:wtjohnson@grnoc.iu.edu">wtjohnson@grnoc.iu.edu</a> 317-508-6305</td>
<td>4 hours by Phone</td>
<td>12 hours by Phone</td>
<td>3 days</td>
<td></td>
</tr>
<tr>
<td>Jon-Paul Herron GRNOC Networks Manager <a href="mailto:jph@grnoc.iu.edu">jph@grnoc.iu.edu</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luke Fowler Senior Manager, Software and Systems <a href="mailto:luke@grnoc.iu.edu">luke@grnoc.iu.edu</a></td>
<td>4 hours</td>
<td>12 hours</td>
<td>1 week</td>
<td></td>
</tr>
<tr>
<td>Marianne Chitwood Service Desk Director <a href="mailto:chitwood@light.net">chitwood@light.net</a></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>David Jen Network AVP <a href="mailto:djent@iu.edu">djent@iu.edu</a></td>
<td>12 hours</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
GENI Integrated OpenFlow Network support
24/7 monitoring and NOC Service Desk Support for issues on the GENI OpenFlow Backbone.
GENI Emergency Stop Support
24/7 support for an emergency shut down on the GENI infrastructure

Diagram:
- **NPT**:
  - Respond with denial
  - Is there a good reason to initiate an emergency?
- **NETENG**:
  - Identify ingress traffic from GENI
  - Stop identified traffic
  - Verify success with GPO
  - Reverse emergency stop
- **GPO**:
  - Did the solution fix the problem?
- **SD**:
  - Create an Emergency Stop ticket
  - Close Ticket

Start and End points are marked with circles.
Upcoming Service Desk GENI Experimenter Support Proposal

Experimenter trouble submission web-form – form for experimenters to report a problem they’re having. Form is to ensure GMOC has all pertinent information to either direct them to their Campus Operator or GMOC Engineering.
Upcoming Service Desk GENI Experimenter Support Proposal

- Operations Mailing list – Put together a single mailing list to expand the mailing lists in the Notification Tool to include GENI Experimenters, GMOC Engineers, Service Desk staff and any other entities. Post information on the GMOC site and/or GENI Wiki to provide information for joining the list.
Upcoming Service Desk GENI Experimenter Support Proposal

- GMOC specific GENI User (Experimenter) Impact Guidelines - based on GlobalNOC’s standard Customer Impact Guidelines. Helps Experimenters and other GENI users to set the severity level of the problem that they are reporting.

- GRNOC Customer Impact (CI) Guidelines
Upcoming Service Desk GENI Experimenter Support Proposal

- Update the GMOC website home page to include current support features for experimenters and the GENI community as a whole.

  [http://gmoc.grnoc.iu.edu](http://gmoc.grnoc.iu.edu)
GMOC Contact Information

- Email: gmoc@grnoc.iu.edu
- Phone: 317-274-7783
- Website: http://gmoc.grnoc.iu.edu

Questions, suggestions?