GEC19 GMOC Update

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GMOC UPDATES SINCE GEC18

- ✓ GMOC Development Project Updates
- ✓ New GENI Racks/Regionals Reporting to GMOC
- ✓ GMOC's GENI Network Metrics
- ✓ LLR Overview and Recent Exercise

GMOC DEVELOPMENT PROJECT UPDATES

✓ UI improvements for Emergency Stop and LLR Requests

✓ Ability to lookup Project Owner data from Clearing House/Slice Authorities

✓ A couple of storyboards:

SEARCH GENI RESOURCES BY IP/MAC ADDRESS

SLICE PROJECT OWNER SEARCH SUPPORT

Clearing House and Slice Authorities need to start sending data

GENI REGIONALS REPORTING GMOC

➢ CENIC (COTN – California OpenFlow Testbed Network)
➢ UEN (Utah Education Network)
➢ SOX (Southern Crossroads)
➢ MOXI-CIC and MOXI-Indiana GigaPoP
➢ GpENI – Great Plains Environment for Network Innovation
➢ NYSERNet (New York)
➢ MAX GigaPoP – New InstaGENI Rack
➢ ICCN-MOXI (Illinois) *
➢ StarLight FOAM AM *

GENI RACKS COMPLETED GMOC TURN-UP

InstaGENI (21)

✓BBN – GPO Lab Rack
✓Utah
✓Kentucky
✓Northwestern
✓Georgia Tech
✓Clemson
✓Kettering
✓Princeton
✓Kansas
✓MAX
✓NYU
✓NYSERNet
✓Missouri
✓Illinois
✓Wisconsin
✓SOX
✓Rutgers

✓ **Stanford** *
✓ **Cornell** *
✓ **LSU** *
✓ **IU-MOXI** *

ExoGENI (8)

✓BBN – GPO Lab Rack
✓RENCI
✓FIU-SCIS
✓UH - University of Houston
✓**NCSU** *
✓**UFL** *
✓**OSF** *
✓**UCD** *

* New racks since last GEC

GENI LLR REQUESTS PROCESS

GENI LLR Procedure Workflow

GENI LLR EXERCISE WITH INSTAGENI

GENI LLR Procedure Workflow – detailed document of LLR process

Some Results/Thoughts:
- ✓ Over-all workflow works well – Participants: GMOC, GPO, Steve Schwab (LLR Representative and Jonathon Duerig (Utah)
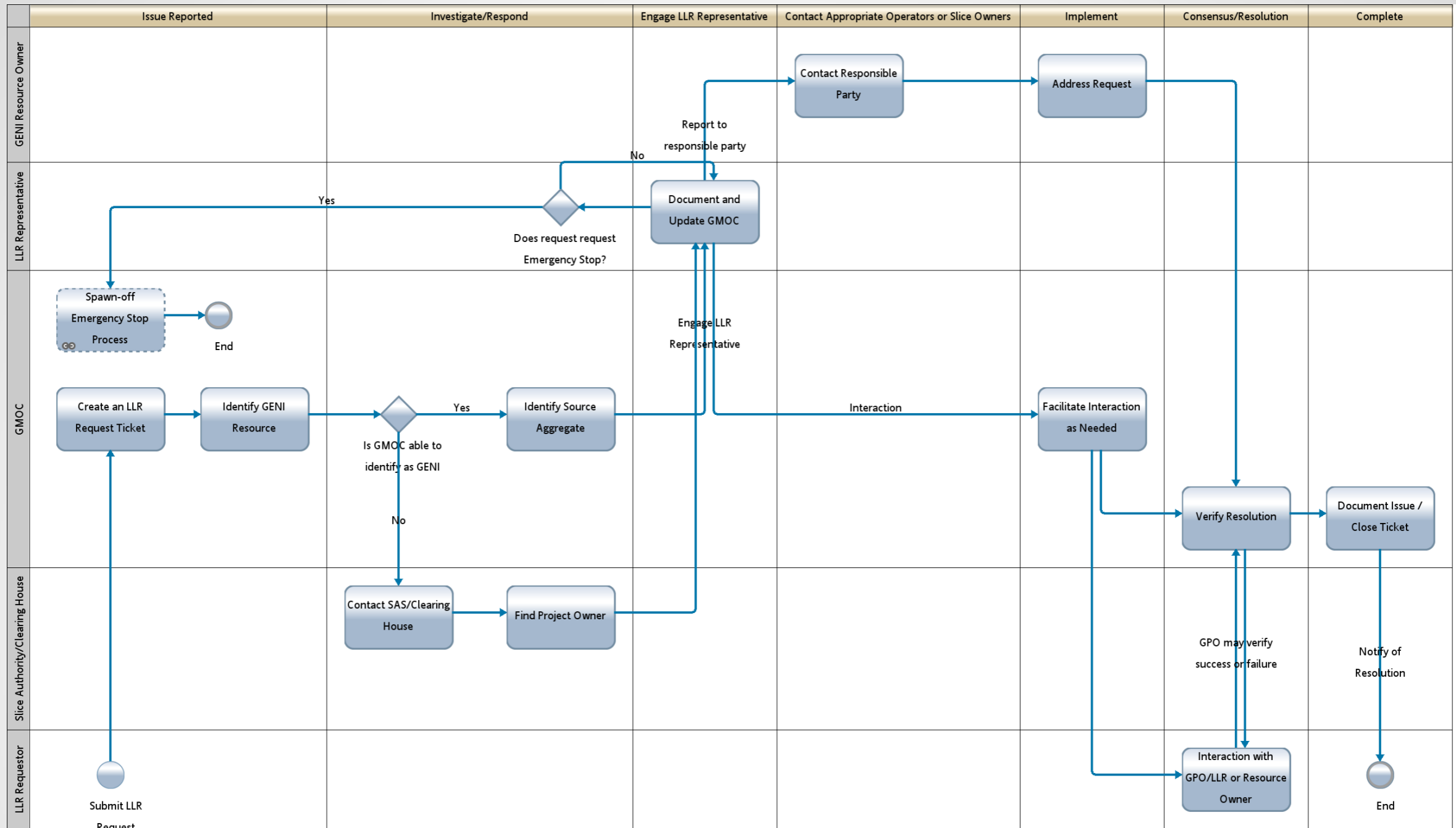- ✓ Need to Improve tools/data (IPs data within a slice)
- ✓ Need for historical data – i.e. Search for by timestamp and IP/MAC
- ✓ InstaGENI – 3 "Panic Button" Levels to isolate resources

Next steps?
- ✓ Test with multi-site involvement. Rack Admin and Slice Authority
- ✓ Do a test with ExoGENI
- ✓ Further Develop LLR Communications during an event.
- ✓ Discuss needs with with GMOC-Dev, GPO and Rack Teams
- ✓ Determine How to deal with International GENI Resources and Provisional Racks. (SAs/Clearing House)
- ✓ Identify, recruit, train additional GENI LLR Representative(s)

2013 TOTAL GMOC TICKETS, CALLS AND E-MAIL

Legend:
- Number of Tickets Opened
- Incoming Calls
- Emails Received
- Emails Sent
- Total Emails
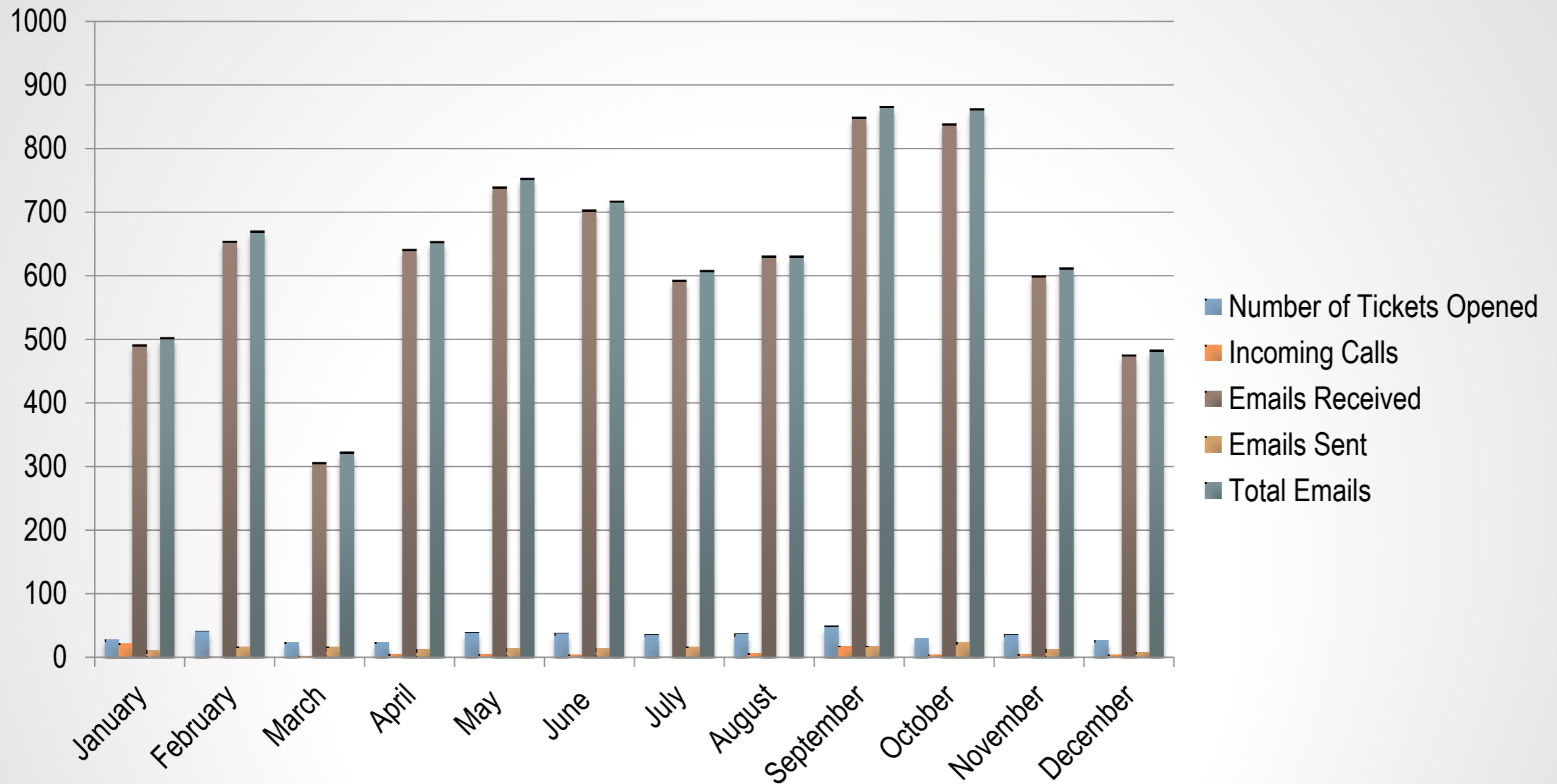
2014 TOTAL GMOC TICKETS, CALLS AND E-MAIL
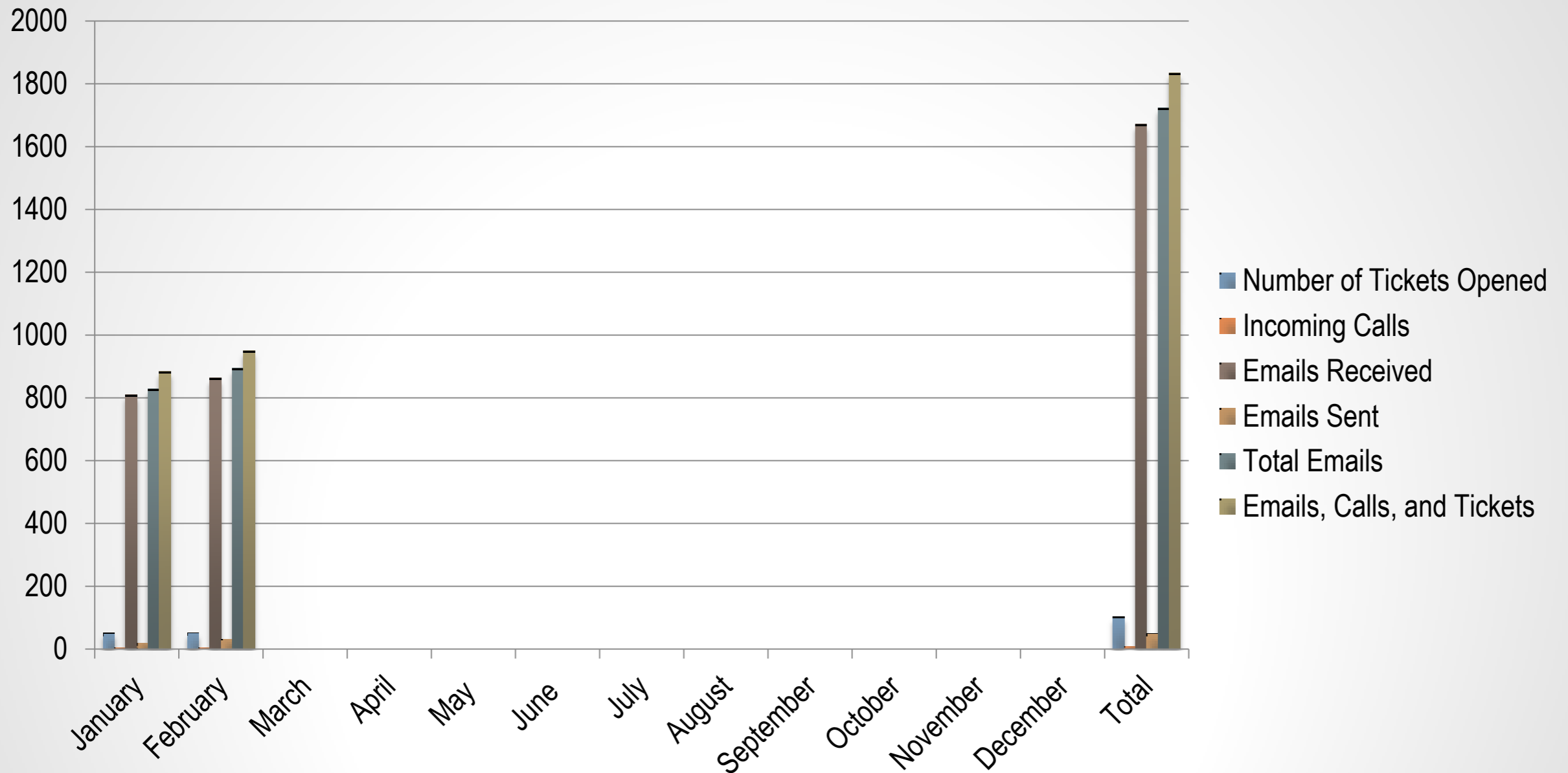
2014 GMOC-DB STATS

FUTURE GENI OPERATIONS SUPPORT NEEDS, CHALLENGES.

- ✓ **Targeted Notifications**
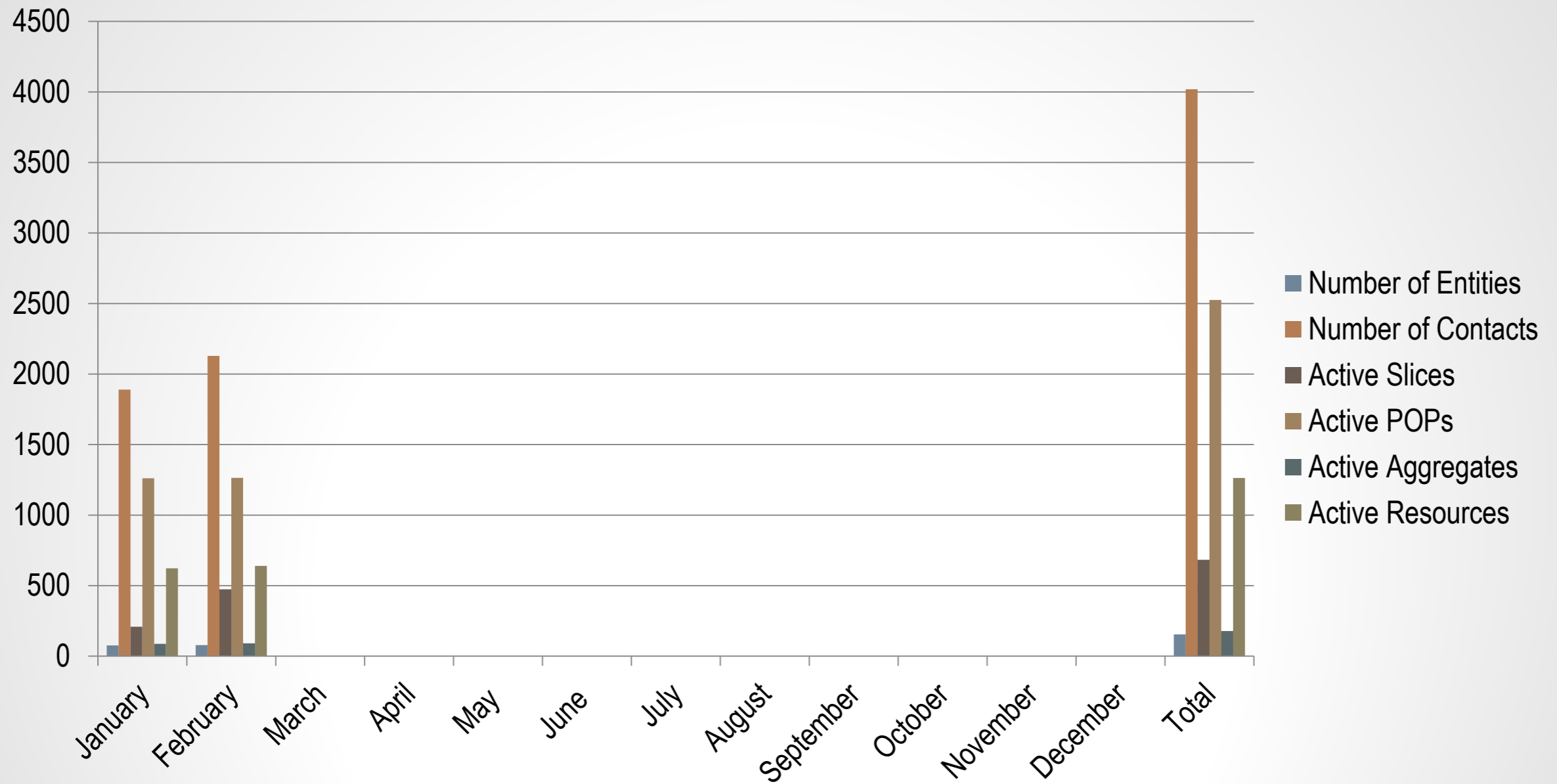- ✓ **Topology (for Emergency Stop and other needs)**
- ✓ **Circuits and Nodes in GMOC-DB**
- ✓ **Pro-active Ops monitoring/alerting**
- ✓ **Tracking outages at Regionals and other dynamic VLAN service providers (ION, AL2S)**
- ✓ **Maintenance Freeze (Scale)**

THANK YOU
QUESTIONS ?

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