



GENI

Experimenter Roundtable

GEC11

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www.geni.net

What is the purpose here?

- GENI is a spiral development effort
 - Early engagement with users and a strong feedback loop is what makes spiral development work
- Feedback should be frank and should be taken in the spirit of friendly advice.
 - “The only thing worse than being talked about is not being talked about.”

- Experiment team feedback
 - Ezra Kissel (U. Delaware)
 - KC Wang (Clemson)
 - Prasad Calyam (Ohio State)
 - Richard Brooks (Clemson)
 - Ashiwan Sivakumar (Purdue)
 - Mark Berman (Summary of feedback received)

- Availability of unique or scarce resources (ORBIT, geographically-distributed ProtoGENI)
- Availability of imagable nodes (typically ProtoGENI) for longer-duration experiments.
- Desire for better (or any) slice storage / archive capabilities for slice configuration and for slice-created data. Both for backup and for experiment replication purposes.

- Response to person-to-person support (phone, e-mail) is generally positive. Online (wiki) documentation is appreciated, but experimenters are concerned that it is not always comprehensive, current, and correct.
- Strategies needed for wireless experiments involving mobility. Remote access and mobility are a challenging mix.
- Would like additional wireless testbed options (other than ORBIT, DieselNet).

- Ivan is extremely helpful and provides fast response.
- Errors, version mismatches, and out-of-date info in ORBIT and NORBIT wiki documentation. (Specific concerns that descriptions of testbed are not current.)
- Uploading images is slow and subject to intermittent failures, making it hard to run an experiment with more than 15 nodes with a 2 hour reservation time slot.

- Missing details make it difficult to follow examples in ORBIT wiki.
- Would like mobility experiment example in ORBIT.
- Trouble measuring latencies, would like advice from others.
- ORBIT and NORBIT testbeds have too many differences to be used interchangeably by experimenters.
- NORBIT: calendar misunderstandings can lead to node use collisions and data loss

- The OML client library isn't thread-safe
- ORBIT testbed not stable

- (*) Various concerns around management of ProtoGENI images:
 - Different images available at different ProtoGENI sites
 - Hard to know what images will run on what hardware
 - Suggest a knowledge base with available images, sites, compatible hardware
 - How to get a custom image or OS
- “We primarily use ProtoGENI. GUI on the website is working fine, and the OMNI tool is even better. It is easy to get started with, and the command-line is efficient.”

- Availability is good and they are working correctly.
- (*) The scale is a little bit limited, especially when we need to get long-term resources at multiple geo-locations.
- After reserving resources on GPO test bed, we noted that nodes remain in “Not Ready” state for more than an hour sometimes. We have encountered this issue since 13th July.
- (*) Serial console access is useful for debugging, but isn't consistently available.

- I find lot of nodes that are up at any point of time.
- (*) My work is related to finding latencies between nodes. Since PlanetLab nodes are available at many geographical locations, it gives good results for my experiments.
- It would be good if a notification is sent to the owner of a slice, when any node in the slice goes down.

- Use increasing
 - "Just works" for supported configurations.
 - "We use the OMNI tool to create slices and slivers where INSTOOLS performs the instrumentation of these slices."
- (*) Would like INSTOOLS to work with more ProtoGENI OS images.
- Would like INSTOOLS to work on other compute nodes (PlanetLab).
- Some growing pains experienced by early adopters using Flack / INSTOOLS as integration is ongoing.

- "The support is working well."
- The documentation on the GENI wiki is very helpful, and much improved over what was available a year ago when experimentation efforts started. I hope that the wiki will continue to be nicely maintained as GENI moves forward.
- (*) It would be useful to have a glossary of important GENI terms (e.g., clearinghouse, slice authority, etc.).
- Having difficulty getting OpenFlow switch and its user's guide or a guide for experimenters. It would be very helpful if such a document could be provided.
- (*) Thankful to GPO staff and ProtoGENI developers from Utah and Kentucky for quick responses