GENI Long-Term Planning

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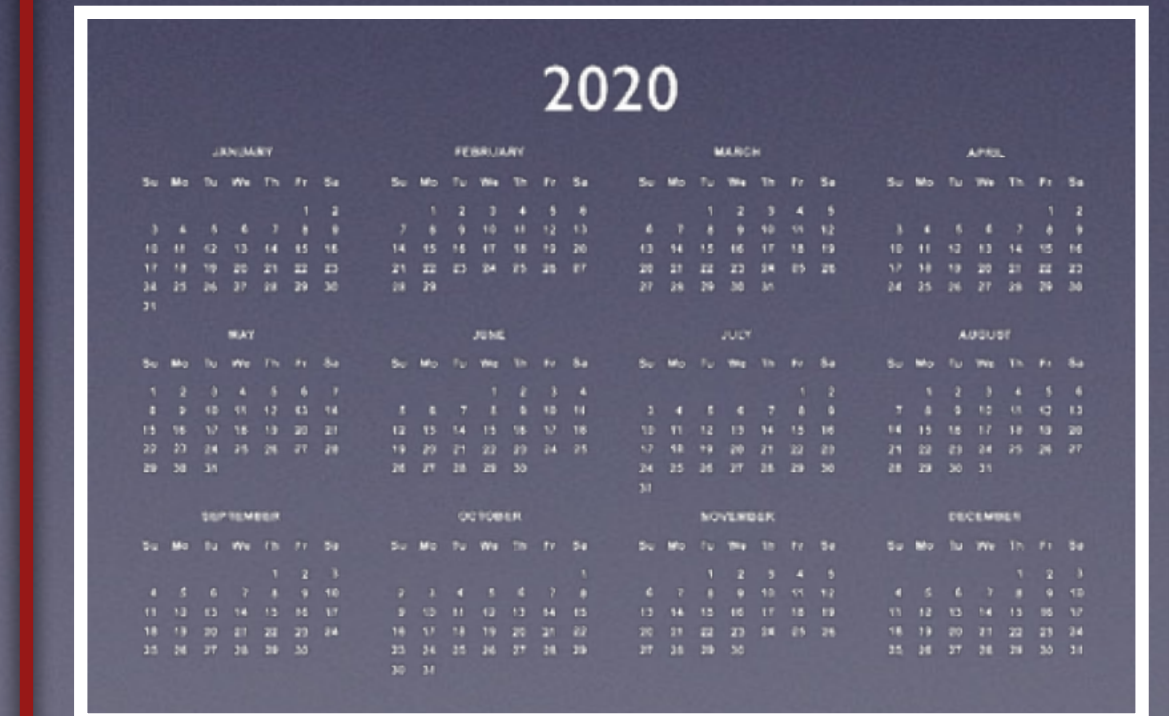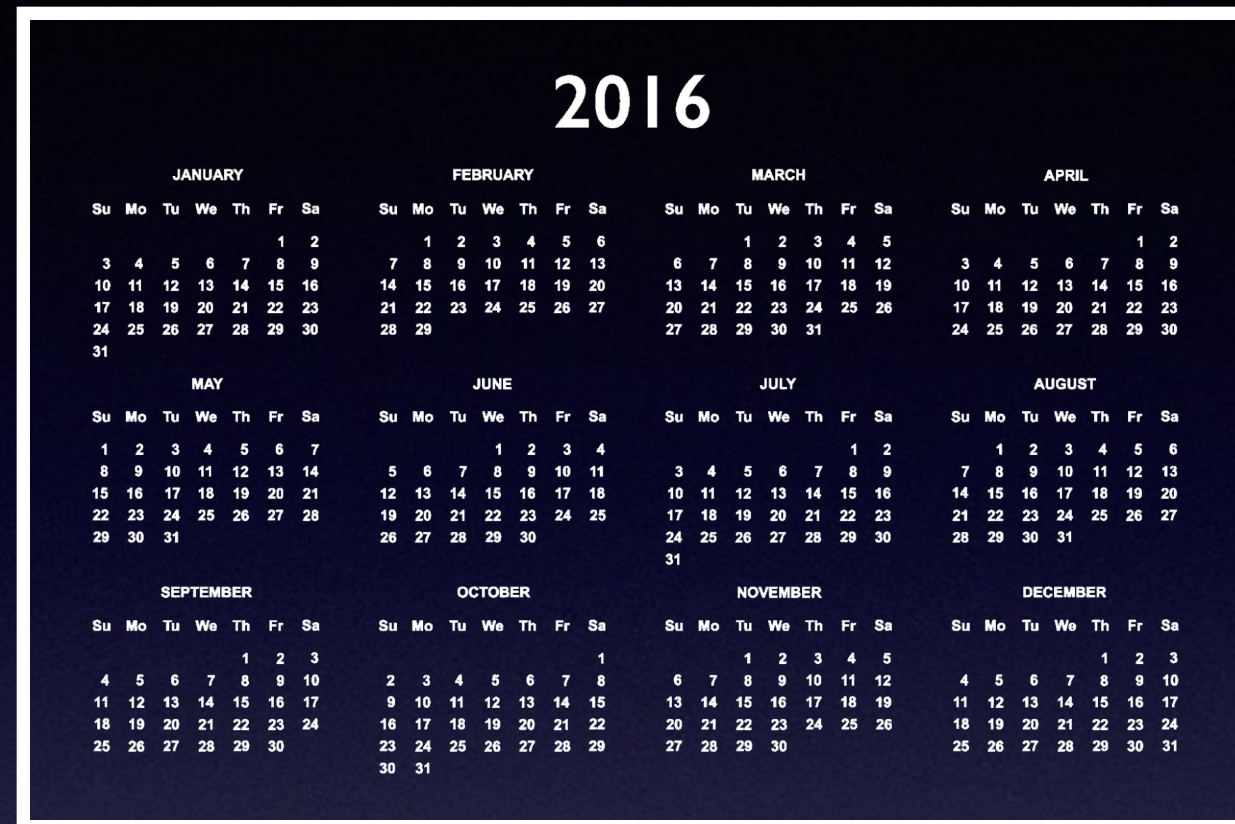
March 8, 2016

This Session: Looking at 2018++

2016

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geni
Exploring Networks
of the Future

NSF

This Session: Looking at 2018++

GENI 2018++

- GENI operations continue with support from NSF and others
- New oversight structure
- GENI technology prominent in new cyberinfrastructure programs

Session Outline

Update on GENI future planning process
- December 2015 planning workshop report
- Recent progress on governance, funding, and transition

Panel: Consortium models for GENI future activities
- Ilya Baldin (RENCI), Joe Mambretti (Northwestern), Kuang-Ching Wang (Clemson), Rick McGeer (CDG and US Ignite)

Community discussion of GENI hardware refresh approach

Discussion of consortium membership recruitment strategy

December 2015 planning workshop report

GENI Future Planning Workshop

The GENI future planning workshop was held on December 10-11, 2015 in Washington, DC
- 48 participants
- Majority from academic institutions
- Significant representation from industry and from US government research organizations

Full report and additional details available from GENI wiki:
- GENI Future Planning / December 2015 Meeting

Workshop Acknowledgements

Organizational and report writing heavy lifting by session chairs:

- Deep Medhi (UMKC)
- KC Wang (Clemson)
- Dipankar Raychaudhuri (Rutgers)
- Mike Zink (UMass)
- Andy Bavier (Princeton)
- Jim Griffioen (Kentucky)
- John Geske (Kettering)
- Joe Mambretti (Northwestern)

Framing by context setting speakers:

- Jim Kurose (NSF)
- John Moore (Internet2)
- Glenn Ricart (US Ignite)
- Jim Bottum (Clemson)
- Rob Ricci (Utah)
- John Geske (Kettering)
- Ilya Baldin (RENCI)
- Joe Mambretti (Northwestern)
- Rick McGeer (US Ignite)
- Andy Bavier (Princeton) & Jim Griffioen (Kentucky)

GENI Future Planning Workshop
Key Results: Consensus and Progress

1. GENI has become a vital tool for research and education.

2. Sustaining and consolidating current GENI capability is of central importance.

3. It is desirable to have a centralized administrative body, with a role similar to the existing GENI project office.

GENI Future Planning Workshop
Key Results: Consensus and Progress

4. GENI should continue to bring researchers larger scale and wider resource diversity through federation.

5. GENI must both plan for and actively solicit continued rapid growth in adoption.

6. Consistent funding is important to enable researchers and educators to adopt GENI with confidence.

GENI Future Planning Workshop
Additional areas of consensus

7. Agreed on a rough expense budget* and the desirability of a near-term equipment refresh.

8. Agreed on a two-body governance model, comprised of a GENI council plus an administrative / management group.

9. Agreed on rough timeline and milestones for 2016 and 2017.*

10. Agreed on priorities for development and community outreach.*

(*) See full workshop materials for details.

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GENI Future Planning Workshop
Key Results: Open questions and actions

1. Are there adequate sources of revenue for ongoing GENI operations and sustainment?

2. Who (specific individuals and organizations) will staff and host the GENI governance bodies beyond 2017?

   Workshop asked Mark Berman to form a small transition team to look at the most pressing risks: retaining key expertise, maintaining budget security, and expanding GENI's research contributions and report at GEC24

Recent progress on long-term planning

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Recent Transition Team Progress

Recruited two transition team members
- Rick McGeer & KC Wang

Discussions with NSF CISE on funding, governance, & research focus
- NSF expects to provide substantial 2018++ funding.
- Host, member, and/or sponsor institutions should have skin in the game.
- Important to address both sustainment and an ambitious larger agenda.
- Time is of the essence.

Solicited nominations for GENI council members and host institutions, and conducted some early discussions.

Nominees for GENI Council

Received nominations for twelve individuals and one category.

- Nick Bastin, Barnstormer Softworks
- Mark Berman, BBN
- Jim Bottum, Clemson
- Jeff Chase, Duke
- John Geske, Kettering
- Jim Griffioen, Kentucky

- Vinod Mishra, ARL
- Rob Ricci, Utah
- Ivan Seskar, Rutgers
- Peter Steenkiste, CMU
- KC Wang, Clemson
- John Wroclawski, USC
- GENI Users

* Not all nominees have accepted. Some may be finding out at this moment.
* Additional nominations are welcome: future-discuss@geni.net preferred.

Candidate GENI Host Institutions

The transition team is aware of a total of eight potential host institutions.

- Two non-profit institutions (Internet2 and US Ignite) identified during the December 2015 future planning meeting.
- An additional six universities (three public, three private).
- At least one institution is exclusively interested as a consortium participant.
- Still in early stage discussions, but time is of the essence if an effective transition is to be completed in 2017, so any additional candidates should be identified quickly.

Consortium Model for GENI Governance

Based on discussions with community leaders, the transition team is leaning towards a consortium model as the correct refinement of the workshop's council plus management team plan.

- Key institutions join the consortium and participate in governance.
- What contributions are expected from consortium members (money, space, hosting, staffing)?
- Are council members drawn exclusively from member institutions?
- Centralize administration/management at one member or distribute?
- Are there multiple tiers of membership?

The transition team is looking to panelists and all present to help address these questions.

Panel: Consortium Models for GENI++

Discuss a case study of a consortium-based organization supporting a scientific research community.

Questions for group thought and discussion
- What are desirable characteristics of a possible future GENI consortium?
- What strategies will best simultaneously address both sustainment and ongoing R&D?
- What are the benefits/drawbacks of drawing membership from academic v. industry institutions?

Panelists

Ilya Baldin
RENCI

Kuang-Ching Wang
Clemson

Joe Mambretti
Northwestern

Rick McGeer
CDG & US Ignite

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