GENI Network Stitching: Summary and Wrap Up

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Agenda

- Introduction – Aaron Helsinger
- Stitching Architecture – Tom Lehman
- Stitching Schema and Workflows – Tom Lehman
- Demonstration
- Discuss Schema
- Stitching APIs – Tom Lehman
- Discussion – All
- Summary & Wrap Up – Aaron Helsinger

Stitching Architecture

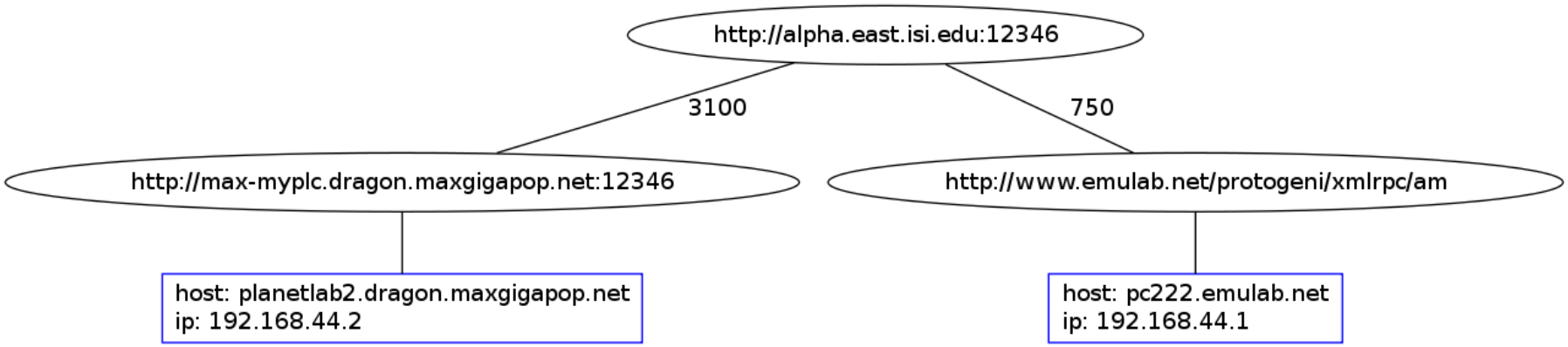
- Use a common schema
- Several key functions
  - Topology function, path computation function, workflow function, and AM API extensions
- Use a common API

Schema

- ProtoGENI V2 Extension
- Based on OSCARS / IDC schemas and IETF GMPLS and PCE
  - Forward compatible with both GENI and OSCARS/DYNES/etc
- Advertisements list connection points
  - For example, switches connected to another aggregate
- Requests and Manifests list a path
  - Hop by hop, which links (switch/port pairs), showing the switching capability (ies) available or to be used
- Ready to adopt?

Demo

- Showed use of stitching schema at ProtoGENI
  - Works
- Tree workflow client coordinating requests
- Dynamic assignment of VLANs across 2 aggregates and a backbone
- Current AM API is enough, without negotiation
- Architecture works



APIs

- Support Chain and Tree Mode
- Support Negotiation
- Require additions to AM API

- Multiple agreement points

- Points remaining to discuss

Discussion Summary

- Key points made in discussion

Next Steps

- Stitching Schema implementation
  - PG (complete)
  - ION
  - MAX
  - OpenFlow
  - Tango GENI sites
  - Others
- APIs
  - Ongoing Discussions
    - dev@geni.net
  - Adopt at GEC12?

Get Involved!