



Future GENI Experimenter Tools

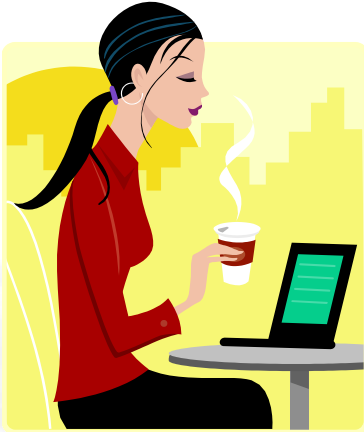
GEC11 New Topics Session

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July 27, 2011
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Ten minutes is too little time for a comprehensive assessment of the tool needs of GENI experimenters and the current tool suite.

Instead, I hope to:

- Suggest a rough tool taxonomy
- Continue a conversation about the relationship between experimenter tools and GENI aggregates



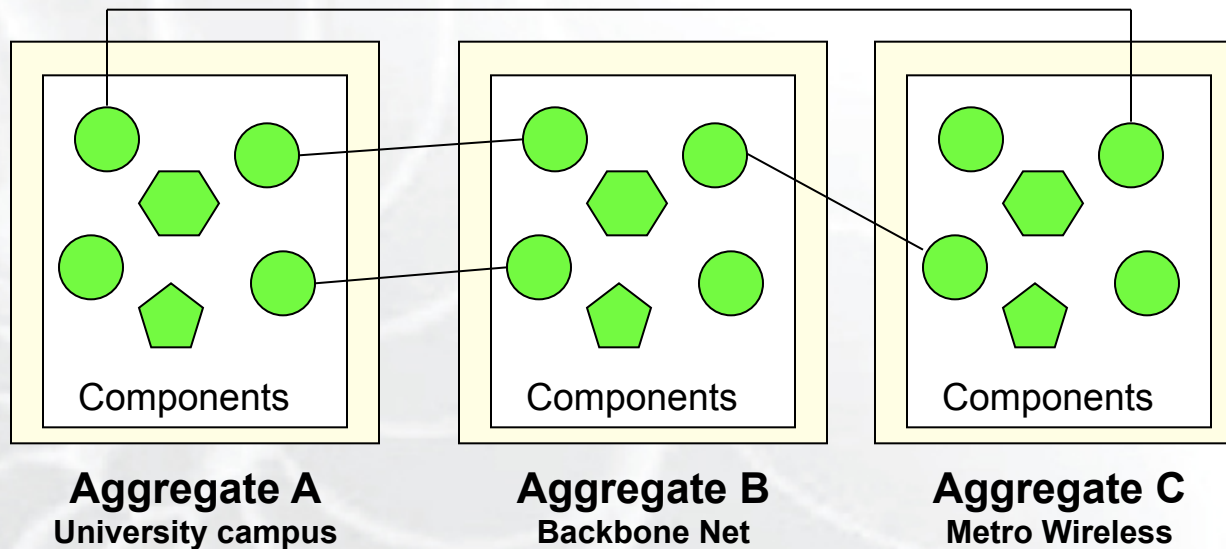
Researcher

What resources can I use?

Create my slice

Experiment – Install my software, debug, collect data, retry, etc.

Publish.



- Resource discovery and experiment configuration
 - (+) Identify resources
 - (-) Group resources into types
 - (-) Topology design / stitching
- Long-lived experiment maintenance
 - Modify slices
 - (--) Troubleshoot and repair
 - (-) Manage distributed configuration

- Software distribution
 - Initial deployment
 - Updates and configuration management
- Instrumentation
 - (--) Status awareness for debugging / troubleshooting
 - (-) Select / start / stop data gathering
 - (-) Display – graphs and analyses

- Exposing additional API to tool developers will permit more capable tools (but may constrain and/or burden aggregate developers).
 - Raven and Gush developers desire additional slice introspection capabilities.
 - Omni “listmyslices” capability
- Ongoing API discussion between tool and aggregate developers is a good thing.
 - If choosing an aggregate-specific API, best if the decision is explicit, rather than an expedient.
 - Should be cautious in using unpublished APIs.