

The GENI Desktop

(A GUI for Creating, Running, and Monitoring Experiments)

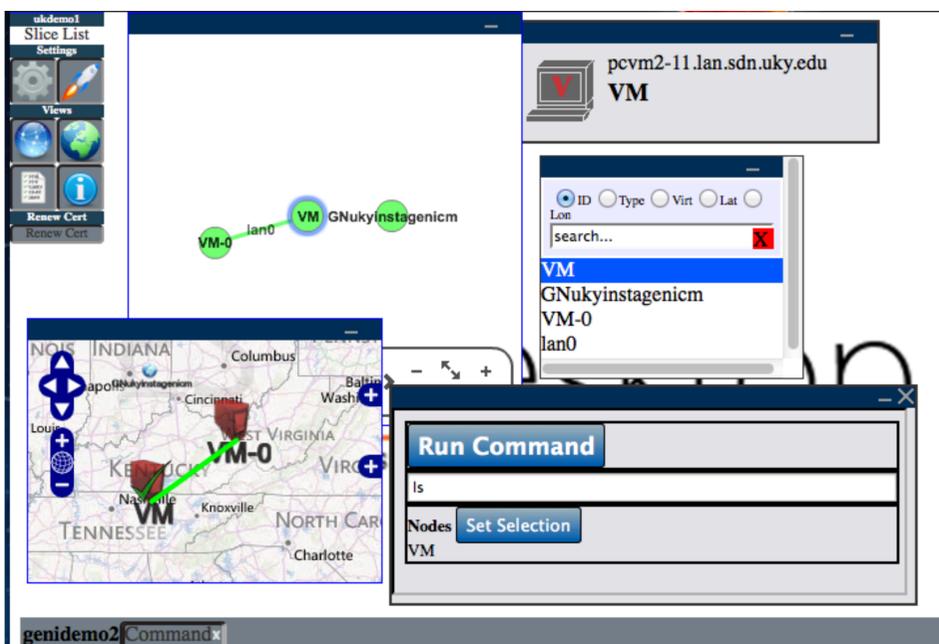
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The GENI Desktop

- In short, the goal of the GENI Desktop is to make it easier for experimenters to create, control, interact with, and evaluate the performance of the resources that comprise their slice.
- The GENI Desktop provides an easy-to-use graphical user interface (GUI) by which experimenters can create, run, and monitor experiments.
- Being part of the GEMINI project, the GENI Desktop is tightly integrated with, and serves as the GUI for the GEMINI instrumentation and measurement services. It also acts as a one-stop interface for accessing to a growing number of GENI Tools (e.g., Flack, GEMINI measurement services, the portal, and iRods)
- The GENI Desktop provides windowing-system style features inside a web browser to create the look-and-feel of locally running tools (without having to actually install, manage, and run tools locally).

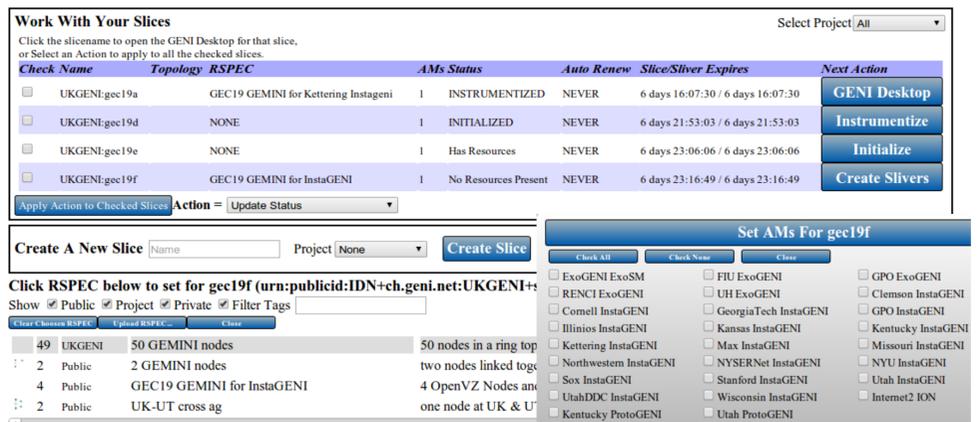
A Single Interaction Model

- A user's resources can be viewed as a logical topology, a geographic topology, or simply as a list of resources.
- Regardless of the view, users interact with their resources using a single abstraction that involves (1) Selecting resources, and (2) apply operations on those resources.
- The abstraction allows users to apply operations to a large number of resources at the same time. For example, a users can select a set of nodes and then apply the "view traffic" operation to see graphs of the traffic on those nodes.
- This model extends to slices as well, allowing users to select a set of slices and then apply an operation to all selected slices (e.g., delete slivers)



GENI Desktop Features

- Single sign-on to tools.
- Create slices
- Create slivers via Flack, GENI Portal or GENI Desktop.
- Instrumentize a slice for use with GEMINI.
- Breadcrumb trail help.
- Multiple topology views.
- Support for cross control framework experiments
- SSH into nodes
- Upload files onto nodes
- Run commands on nodes
- View traffic graphs
- Drill-down to detailed packet-level monitoring data
- View both active and passive measurement data
- Access to archival services
- Support projects
- Enhanced slice management



Viewing GEMINI Measurements

- Users can view active or passive measurements being collected at a node simply by selecting the nodes to be viewed and then specifying the type of traffic to be viewed (e.g., IP, TCP/UDP).
- Traffic graphs are viewed via "windows" on the screen that can be moved, iconified, resized, etc, much like other window systems.
- Users can dynamically control the set of GEMINI measurements that are collected and displayed.
- GEMINI measurement data can be archived to iRods for future analysis.

