

GENI Opt-in Scenarios and Capabilities

Harry Mussman
GPO Systems Engineer
October 22, 2008 b

GENI opt-in scenarios, plus current view of issues and tasks:

Scenario 1) Experiment on GENI that provides a service to users and/or others.

- a) To individual users.
- b) To groups of users.
- c) To content providers.
- d) To other experiments.
- e) Task: formulate more detailed scenarios.
- f) Task: understand motivation, and relationships between players.
- g) Task: formulate policies and best practices.
- h) Issue: voluntary opt-in, or arranged by service provider (or other organization).
- i) Issue: if voluntary opt-in, nature of attraction.
- j) Issue: if arranged by service provider, nature of service and need for “fast restoration”.

Scenario 2) Experiment on GENI that can affect and disrupt users and/or others.

- a) Within GENI.
- b) Outside of GENI, including disruption via the Internet.
- c) Task: formulate more detailed scenarios.
- d) Task: formulate policies and best practices.
- e) Issue: need capability to detect and react.

Scenario 3) When users (or others) contribute (or associate) resources to (with) experiments on GENI

- a) From an organization, i.e., contributes resources from a testbed.
- b) From individual, i.e., contributes PC to an experiment, or downloads code into his mobile phone.
- c) Task: formulate more detailed scenarios.
- d) Task: understand motivation, and relationships between players.
- e) Task: formulate policies and best practices

Scenario 4) When experiment data involving users is gathered on GENI, and made available to researchers, and possibly others.

- a) Issue: who can see what data?
- b) Issue: isolation of experiments.
- c) Issue: privacy of user data.
- d) Task: formulate more detailed scenarios.
- e) Task: understand motivation, and relationships between players.

- f) Task: formulate policies and best practices.

Scenario 5) Other opt-in scenarios?

GENI opt-in capabilities, plus current view of issues and tasks:

Capability 1) Gateway from GENI to another network.

- a) To the Internet.
- b) To other networks?
- c) Issue: basic functions.
- d) Issue: tagging of traffic
- e) Issue: monitoring of traffic.
- f) Issue: mechanisms for reacting to problems.

Capability 2) Contribution (or association) of a user's node to (with) an experiment on GENI:

- a) Issue: process to contribute computing resources.
- b) Issue: process to download and utilize code.
- c) Issue: security.

Capability 3) Gathering logs and experiment data on GENI, and managing their distribution:

- a) Issue: controlling access to data
- b) Issue: assuring privacy of data.
- c) Issue: assuring anonymity of data.

Opt-in Studies and Documents

Harry Mussman
GPO Systems Engineer