

GENI Infrastructure

- ▶ **Need to have ability to monitor network traffic**
 - ▶ Results of experiments
 - ▶ Debugging an experiment or the environment
 - ▶ Forensic analysis of intrusions
 - ▶ Replay
 - ▶ Defensive capabilities
- ▶ **Need to easily manage the traffic monitoring**
 - ▶ Efficient identification and tagging of relevant packets
 - ▶ Instruct all subset of slivers to record traffic that meets some condition(s).
 - ▶ Ability for slivers to validate packets
 - ▶ Out-of-band control and packet collection?



Proposed GENI Experiment

- ▶ **Dynamics of Large Scale Networks**
 - ▶ Worked on power systems model, including agent actors (done)
 - ▶ Building and coupling communications network model to power systems model (in progress)
- ▶ **Need GENI to facilitate this work**
 1. Deploy such networks in GENI
 2. Determine characteristics (topologies, protocols, ...) that inhibit or exacerbate network failures
 3. Develop and validate models
- ▶ **GENI gets a real use case that we cannot perform today.**

