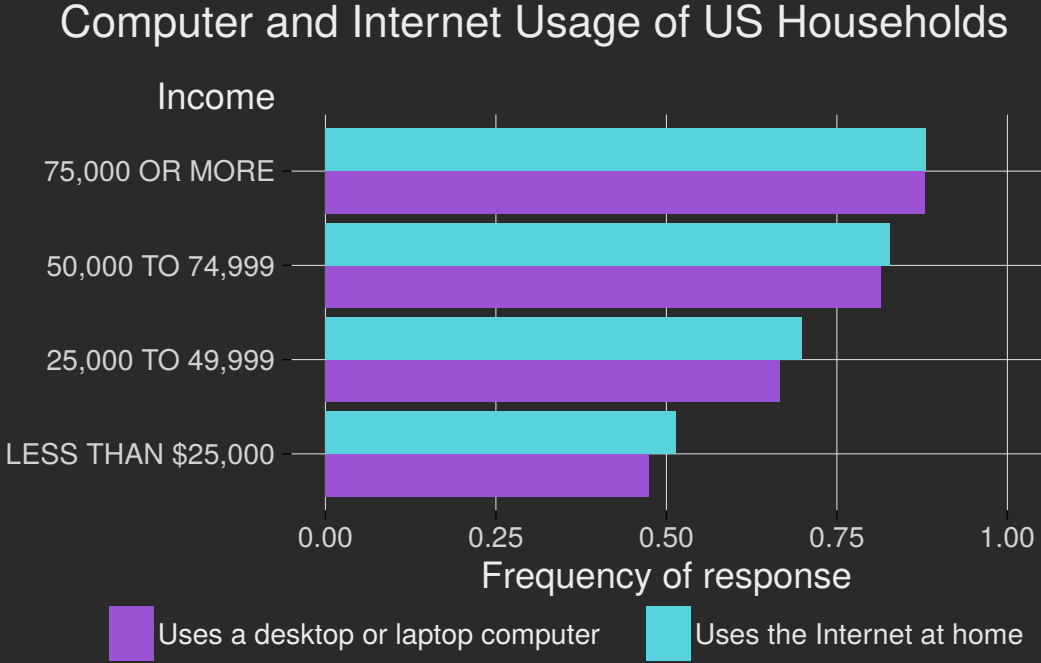# A Community Network in the Cloud

Internet is inaccessible in some communities

Computer and Internet Usage of US Households

Income
- 75,000 OR MORE
- 50,000 TO 74,999
- 25,000 TO 49,999
- LESS THAN $25,000
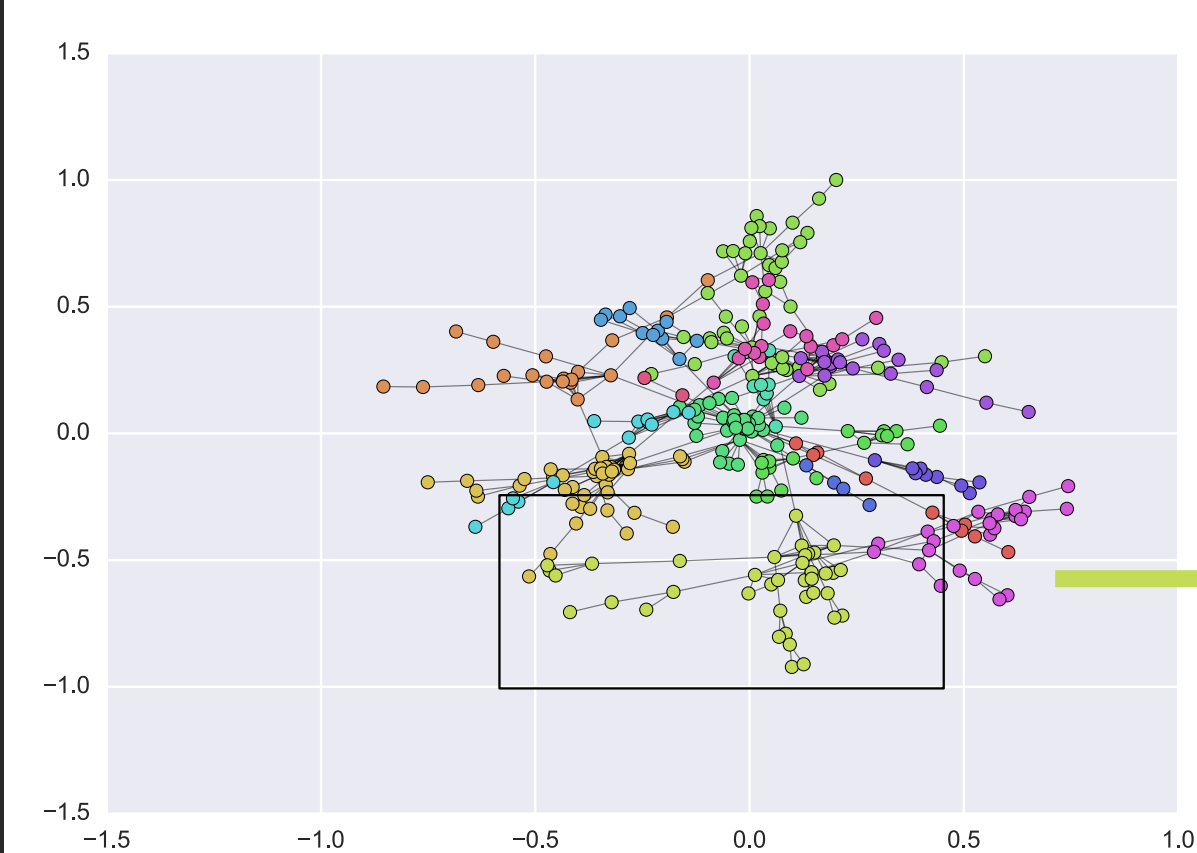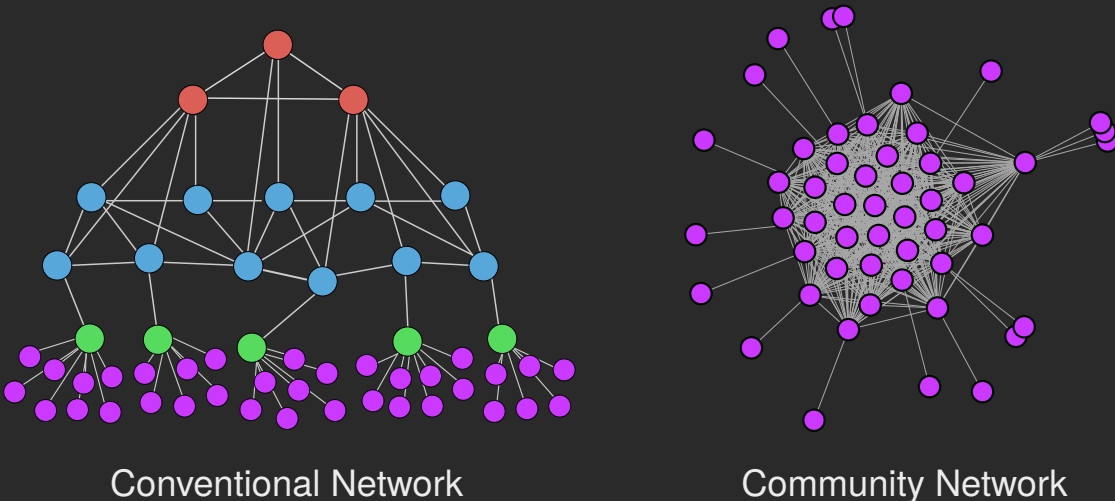
Frequency of response

Uses a desktop or laptop computer   Uses the Internet at home

Community networks are a growing solution
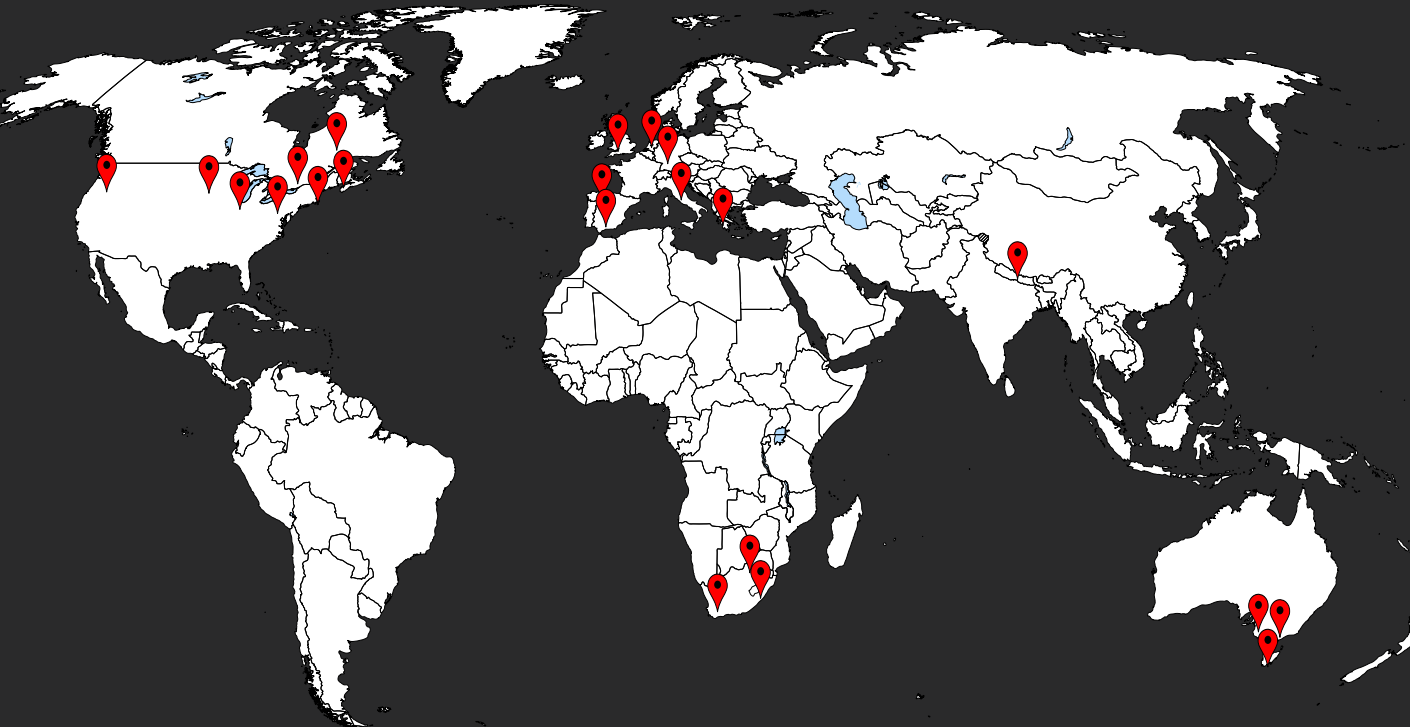
Community networks have different characteristics from conventional networks

Conventional Network   Community Network

1. Download topology and partition into communities, with different colors for each community
2. Choose any subgraph from the topology and isolate it. Find **cliques** within the subgraph
3. Generate nodes and links for GENI based on the subgraph
4. Emulate network properties that active community networks have using netem commands
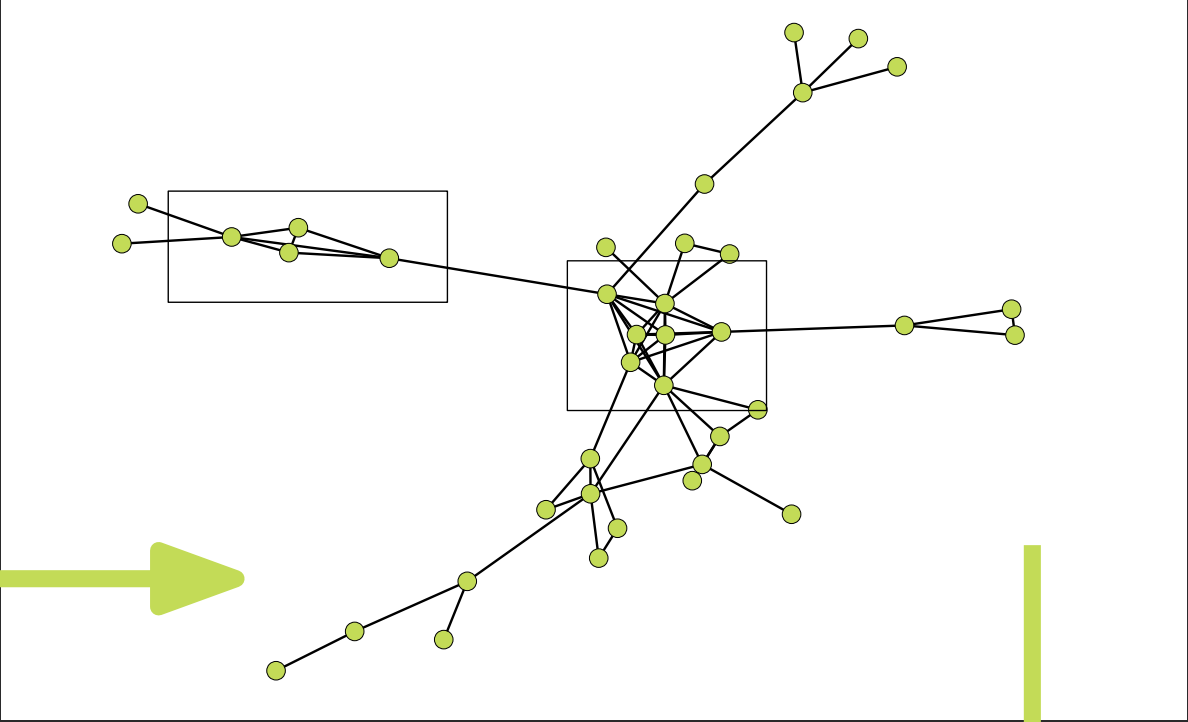
GENI Portal

Drag to Add

VM   Xen VM   EG VM

Raw PC IG   Raw PC EG   OF OVS

New Site

Student: Amaya Muñoz

Mentor: Fraida Fund, Faculty Advisor: Professor Shivendra Panwar