iGENI

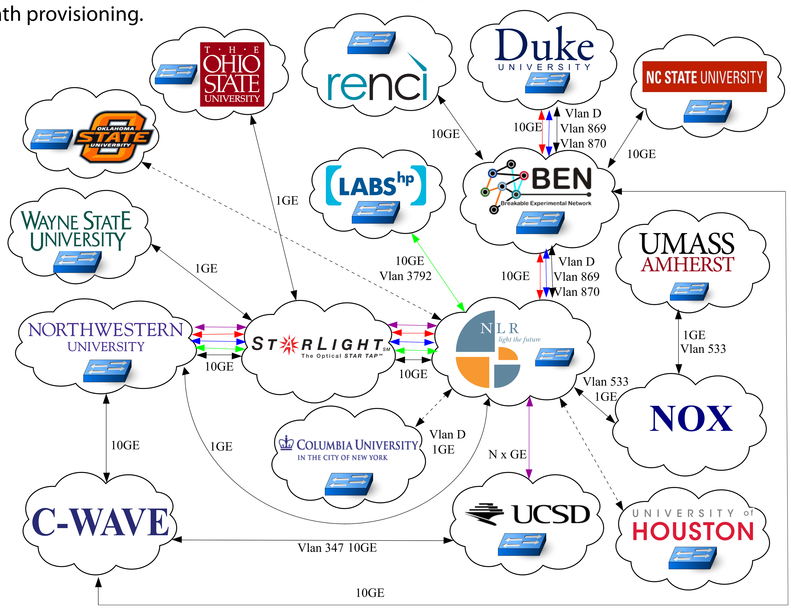
International GENI

iGENI GEC 8 Demonstrations

The iGENI dynamic network provisioning demonstrations showcase capabilities for large scale (national and international) multiple domain dynamic provisioning, including L1/L2 path involving multiple sites. These demonstrations, using innovative network programming and methods, specialized signaling and implementation techniques, , show how such experiments can be conducted on large scale, flexible infrastructure.

Dynamic Provisioning and multi-campuses aggregate for the iGENI Cluster D Network

In partnership with RENCI (Renaissance Computing Institute), Duke University, the University of Massachusetts, and other Cluster-D participants, iGENI Consortium has implemented the Open Resource Control Architecture (ORCA) control framework at the StarLight international exchange facility and is supporting a demonstration of flexible, programmable heterogeneous networking among multiple national and international sites, including dynamic path provisioning.

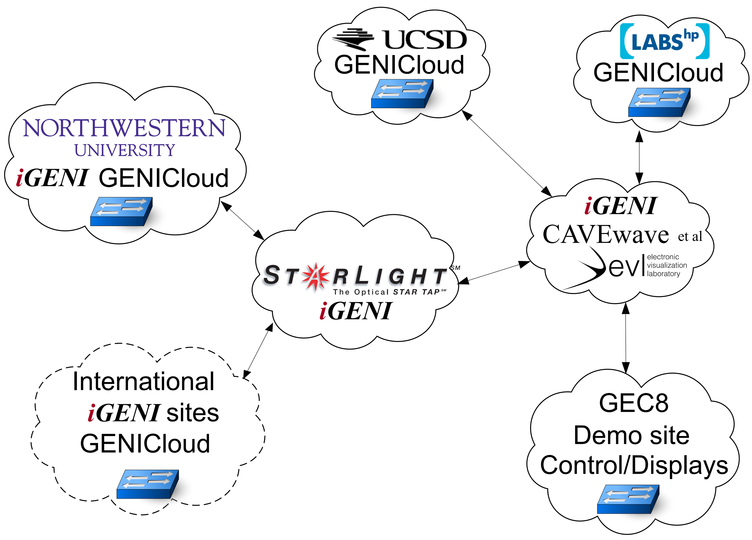


Highly Scalable Network Research TransCloud Prototype

This multi-organization TransCloud demonstration showcases a capability for using dynamic large scale cloud and network infrastructure for highly distributed specialized capabilities among multiple sites connected by the iGENI network, including digital media transcoding and streaming to multiple edge platforms, supported by scaleable cloud computing and network provisioning.

Challenge: Currently, enabling researchers to conduct experiments over large distances has been a difficult complex process, requiring many manual tasks and physical implementations.

Current Solution: These demonstrations are based on a large scale programmable network infrastructure, controlled by control frameworks, including ORCA, which has been implemented within the National Lambda Rail.



The International Global Environment for Network Innovations project (iGENI)

iGENI is developing national and international distributed infrastructure to enable the creation of a virtual laboratory for exploring future internets at scale. iGENI will ensure that GENI is truly global. Led by the International Center for Advanced Internet Research (iCAIR) at Northwestern University, the consortium includes the Electronic Visualization Laboratory (EVL) at the University of Illinois at Chicago; the California Institute for Telecommunications and Information Technology (Calit2) at the University of California, San Diego; Cisco Systems, Inc.; and the BBN Technologies GENI Program Office (GPO). iGENI Consortium members have formed partnerships with many participants in the Global Lambda Integrated Facility (GLIF) as well as with National Research and Education Networks (NRENs), and research consortia and institutions.