

# THE INSTAGENI INITIATIVE

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# THE INSTAGENI RACK

- Designed for GENI Meso-scale deployment
  - Eight 2012 deployments, 24 2013 deployments
- ProtoGENI and FOAM as native Aggregate Managers and Control Frameworks
  - Boots to ProtoGENI instance with OpenFlow switch
- Designed for wide-area PlanetLab federation
  - PlanetLab image provided with boot
  - InstaGENI PlanetLab Central stood up
- Designed for expandability
  - Approx 30U free in rack

# THE INSTAGENI RACK

- Designed for easy deployability
  - Power: 220V L6-20 receptacle (or 110V)
  - Network: 10/100/1000 Base-T
- Designed for Remote Management
  - HP iLO on each node
- Designed for flexible networking
  - 4 1G NICs/node, 20 1G NICs, on the OpenFlow switch, expandable

# INSTAGENI RACK HARDWARE

- Control Node for ProtoGENI Boss, ProtoGENI users, FOAM Controller, Image storage...
  - HP ProLiant DL 360G7, quad-core, single-socket, dual NIC (1 Gb/sec), 12GB RAM, 4TB Disk (RAID), iLO
- Five Experiment Nodes
  - HP ProLiant DL 360G7, six-core, dual-socket, quad NIC (1 Gb/sec), 48GB RAM, 1TB Disk, iLO
- OpenFlow Switch
  - HP E 5406, v2 linecard 20 1 Gb/s
  - Hybrid mode

# INSTAGENI PLANNED DEPLOYMENT

## –GENI funding

- 8 sites in Year 1
- 24 sites in Year 2
- All in USA

## –Other Racks

- US: Attractive program announced by HP State, Local, and Education (SLED) unit
- Abroad: see me.

# INSTAGENI DEMO

IT'S JUST PROTOGENI!

- An InstaGENI rack is just a mini-ProtoGENI cluster with:
  - The ability to instantiate PlanetLab nodes
  - A builtin OpenFlow Controller
  - Ability to bring in external resources (PlanetLab, GENICloud, ExoGENI...)
  - Ability to network to other ProtoGENI resources...
  - Ability to connect campus resources

THANKS!

