

MAX GENI Facility

GENI Cluster B

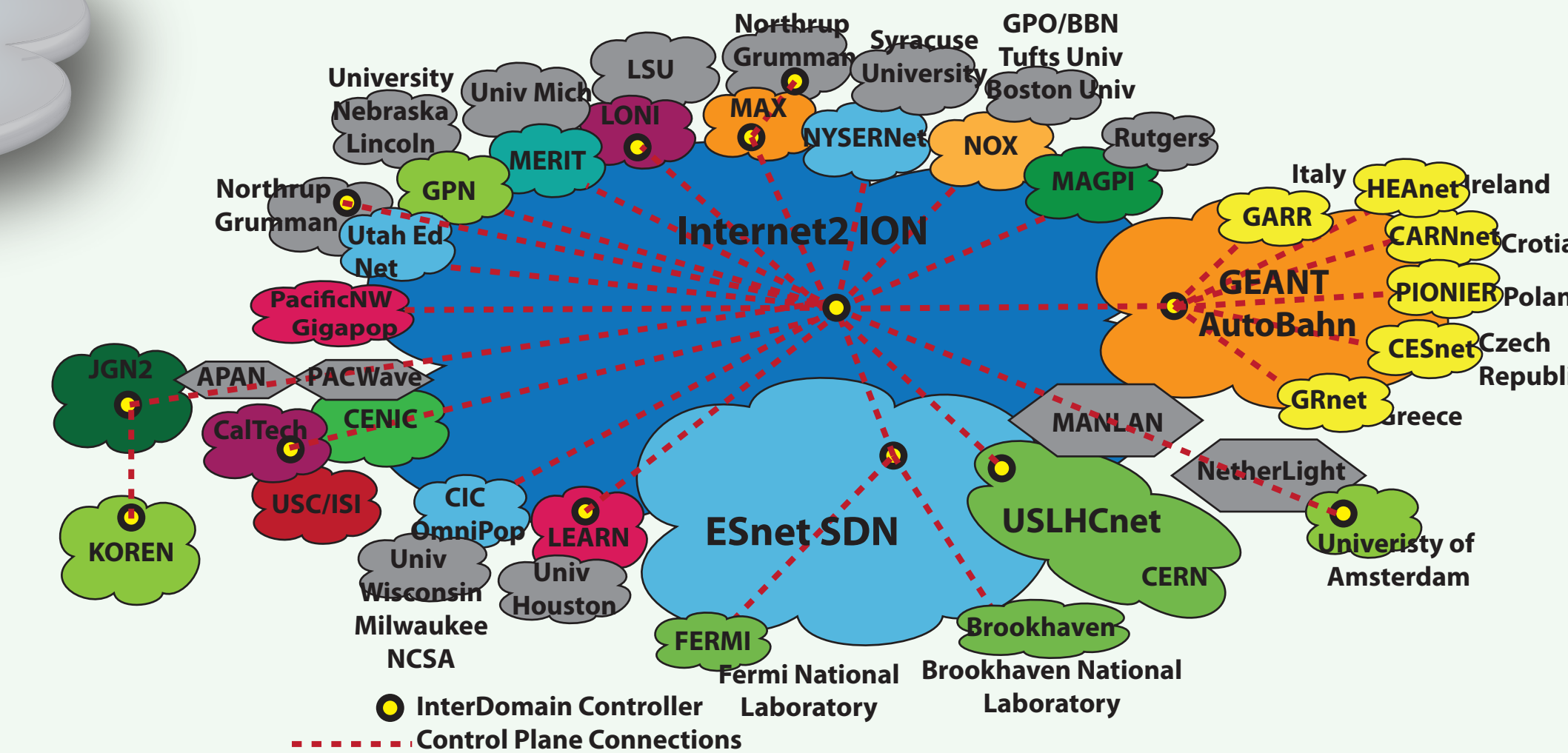
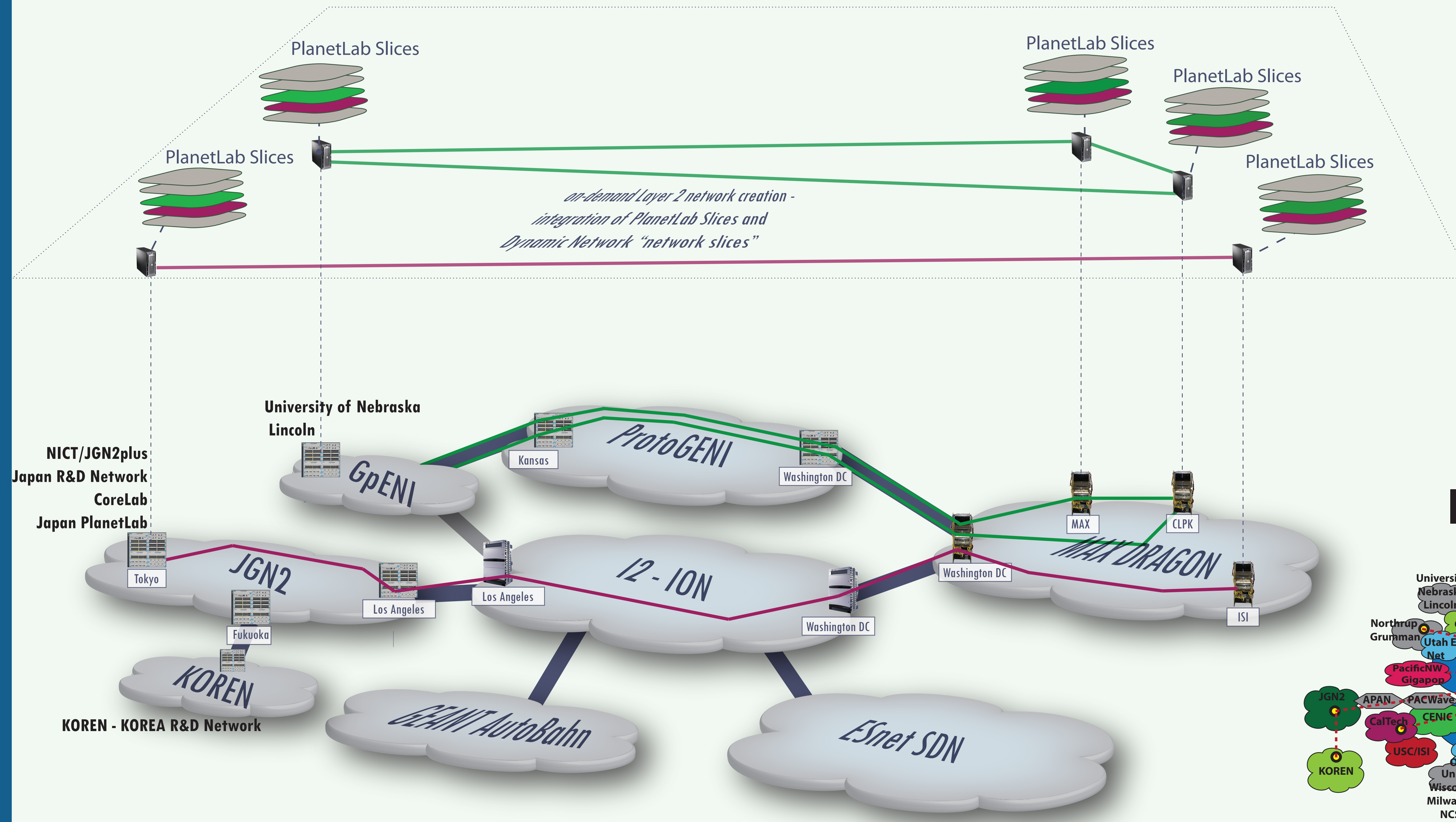
Mid-Atlantic Crossroads (MAX)
University of Southern California/Information Sciences Institute (USC/ISI)

Interconnection to the Global Dynamic Circuit Network == GLOBAL REACH

Dynamic Circuit Network Control Plane defined by the InterDomain Controller Protocol (www.controlplane.net)

Implementations demonstrated here based on OSCARS and DRAGON software

Global Dynamic Network Footprint



Integration of Host Virtualization and Network Virtualization

Substrate Resources:

- PlanetLab Resources
- NetFPGA Hosts
- DRAGON provisioned dynamic network paths
- Eucalyptus Based Cloud Computing Resources

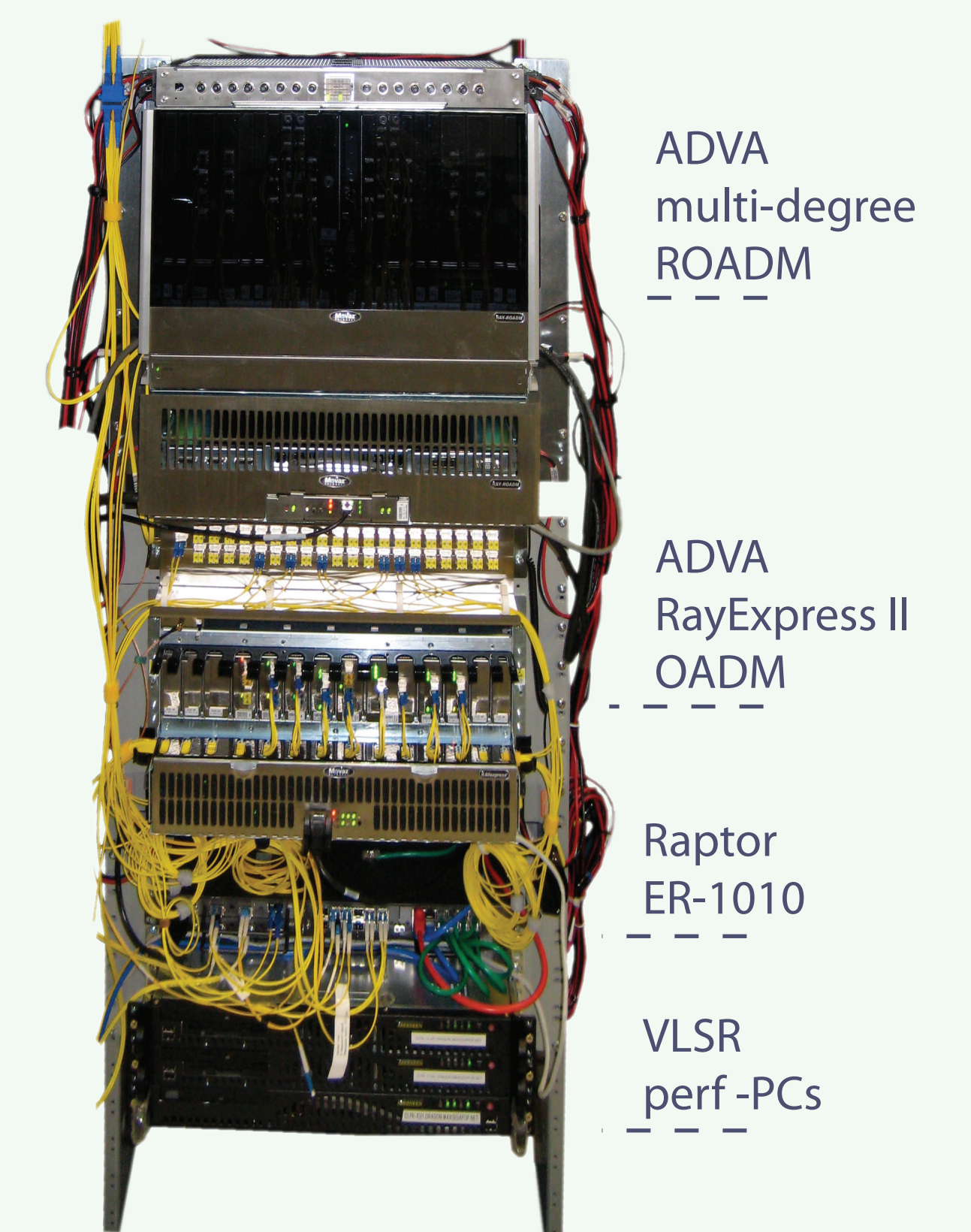
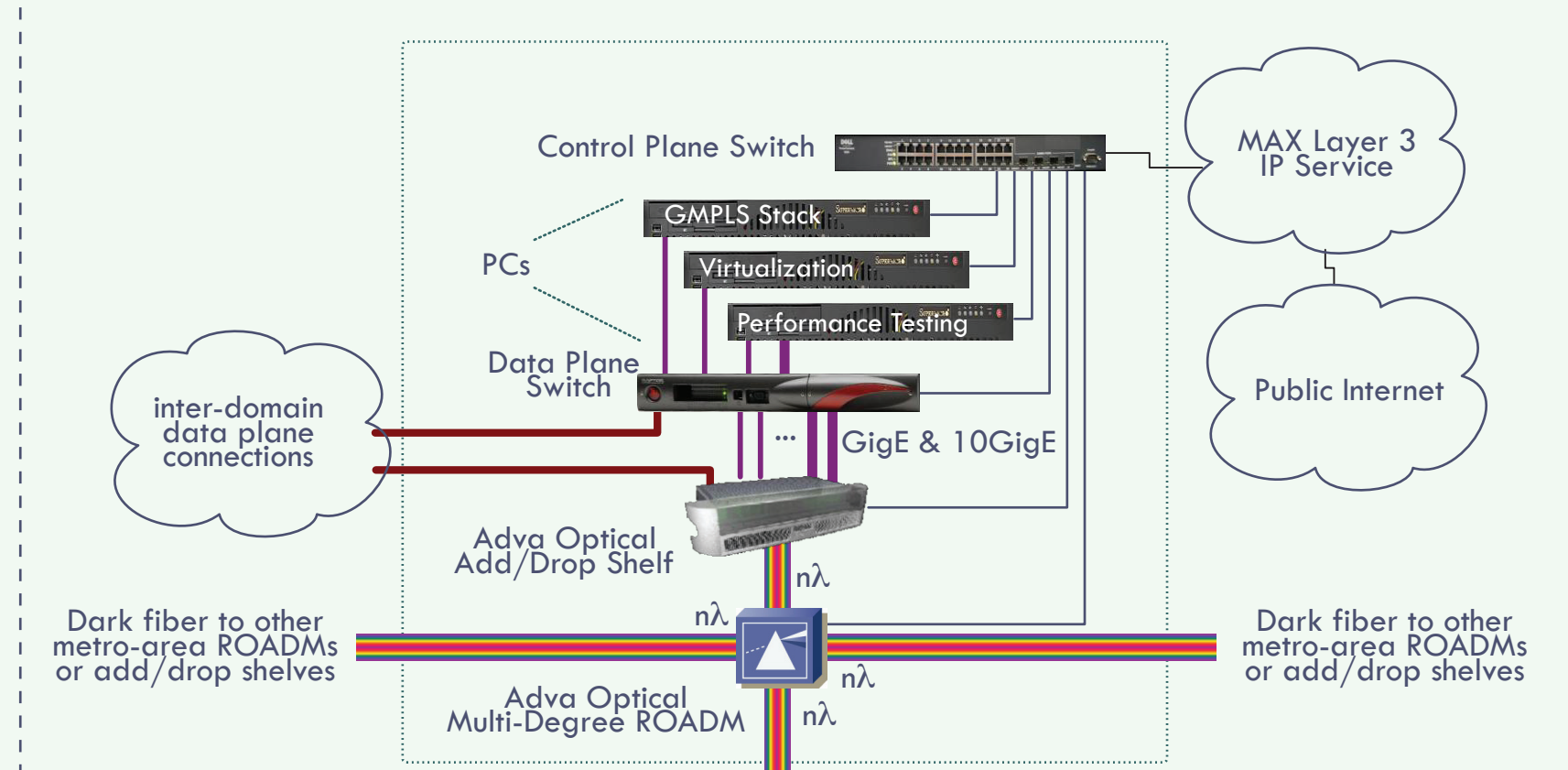
Technology:

- dynamic provisioning of network resources on an inter-domain basis across heterogeneous network technologies
- currently Layer 2 VLAN and SONET/SDH TDM, LSC control available but unused
- leverages the emergence and maturing of optical network technologies to fully exploit power and flexibility of hybrid packet and circuit switched network infrastructures
- KOM-RSVP, zebra ospfd

Control Plane:

- Open-source GMPLS software
- IP control plane which allows provisioning across domain boundaries and multiple network technologies
- Robust authentication, authorization, and accounting
- Modular CSPF path computation element
 - k-shortest paths
 - channel graph

typical DRAGON node



Washington DC Metro Area DRAGON footprint