

A “Research” ISP for Experiments, Insight, & Research

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Recent Challenge

- Setup an IPv4 / IPv6 dual-stack relay server
- Institution had IPv6 peering only with Internet2
- No IPv6 through backbone to our lab net
- Couldn't perform 2002::/32,48,64 announcements
- Setup tunnelbroker.net on lab node
 - Ongoing lab VM cluster/node problems
- Experiment coordination and administration
 - Significant lag time between request and action
- **ARGH:** jtk uses ops role net/sys to do all this work

Basic Idea

- A commercial-looking ISP run by netops for R&E
 - Access to BGP, addressing, servers, locales
- AUP aligned to research purposes
- For TX experiments safe for the Internet
- To RX whatever the net cares to deliver
- Data, data, data
 - flows, BMP, pcap, syslog, traps
- Teaching, training, testing opportunities
- Use the existing net, not try to build a new one

What We Might Do

- Run an anycast environment
- Obtain transit/peering with certain IX or net
- Run Tor exit node, IRC server, UUCP, SMTP, etc.
- TX/RX “magic bits” filtered by institution policy
- Selectively announce BGP routes / attributes
- Sinkholes, black holes, sensors, honey pots
- Provide addressing, connectivity, and hosting
 - For downstream researchers and students
 - Provisioning tools and methods research

This is Not

- Internet++
- High-speed drag racing
- R&E institution/lab interconnect

DataPlane.org

- 100+ VMs / servers around the world
- Sensors for providing threat intelligence
 - Customized listeners: ssh/dns/http/vnc/sip/...
 - Geographic and IPv4 /8 diversity
 - Low cost, some admin burden
 - Feeds widely used by threat sharing orgs
- Acquire PI ASN(s)/addresses
- Acquire distributed hosting space and connectivity
- Community RTBH/flow-spec service