

Peer Nets - HS Sol'n or Challenge?

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Peering driven by \$ (€, £, ¥)

- *Allegation:*
Scarce IPv4 addrs result in DHCP & NATs
 - Sol'ns inhibit user servers
 - P2P as alternative user servers
 - app-layer resource discovery, forwarding as a *goal*
- *Reality:*
ISP charging model assumes server pays
 - ISPs must deny clients ability to become servers
 - DHCP – vary IP address to **inhibit DNS**
 - NAT – hide IP address to **inhibit IP as name**
 - app-layer resource discovery, forwarding as a *means*

Hazards of Peer Nets

- Recapitulation
 - Split horizon, bcast storms, TTLs, ...
- Gateways
 - Apps as hacks to circumvent net hacks
- Integration
 - Freenet + Gnutella = broken routing

Lessons Learned

- Fix the revenue model
 - NATs as a double-edged sword
- Deploy open services
 - Dynamic DNS
 - App-layer resource discovery
 - Net-layer overlay, bcast, mcast, anycast svcs.
- Just Do It
 - OK to build a single application (!)

Summary

- Ernst – we're right, and poor
 - Just do it.
- Burkhard – learn from the hacks
 - Abstract a general capability
- Joe –