IPv6 @ ICANN

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Hardware

- Routers
  - Foundry Netiron MLX4
    - RFC 2080 RIPng for IPv6
    - RFC 2740 OSPFv3 for IPv6
    - draft-ietf-isis-ipv6 Routing IPv6 with IS-IS
    - RFC 2545 Use of BGP-MP for IPv6
    - RFC 2710 Multicast Listener Discovery (MLD) for IPv6

- Switches
  - Foundry FWSX448
    - Basic L2 Switching nothing fancy.

Services with v6

- The following ICANN Services will be reachable via IPv6 Networks (October 2007)

  - DNS Servers (.int , etc.)
  - Most Web-based Services
    - www.icann.org , www.iana.org , blog , forum , etc.
  - Webcast (and archives)
   - For meeting recordings, and live.

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Difficulties

- Finding a transit provider with native reliable ipv6 network.
  - All of the transit providers for the colocation center of ICANN (AS40528) have native ipv6 network capability as native ipv6 connectivity was one of our main requirement while selecting our future transit provider.

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Difficulties

- ## High Availability Practices for Servers
  - Load Balancer limitation
    - As a practice of the high availability we are in the process of implementing Load Balancers in our infrastructure however none of the load balancers on the market currently support load balancing for ipv6.

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Network Design
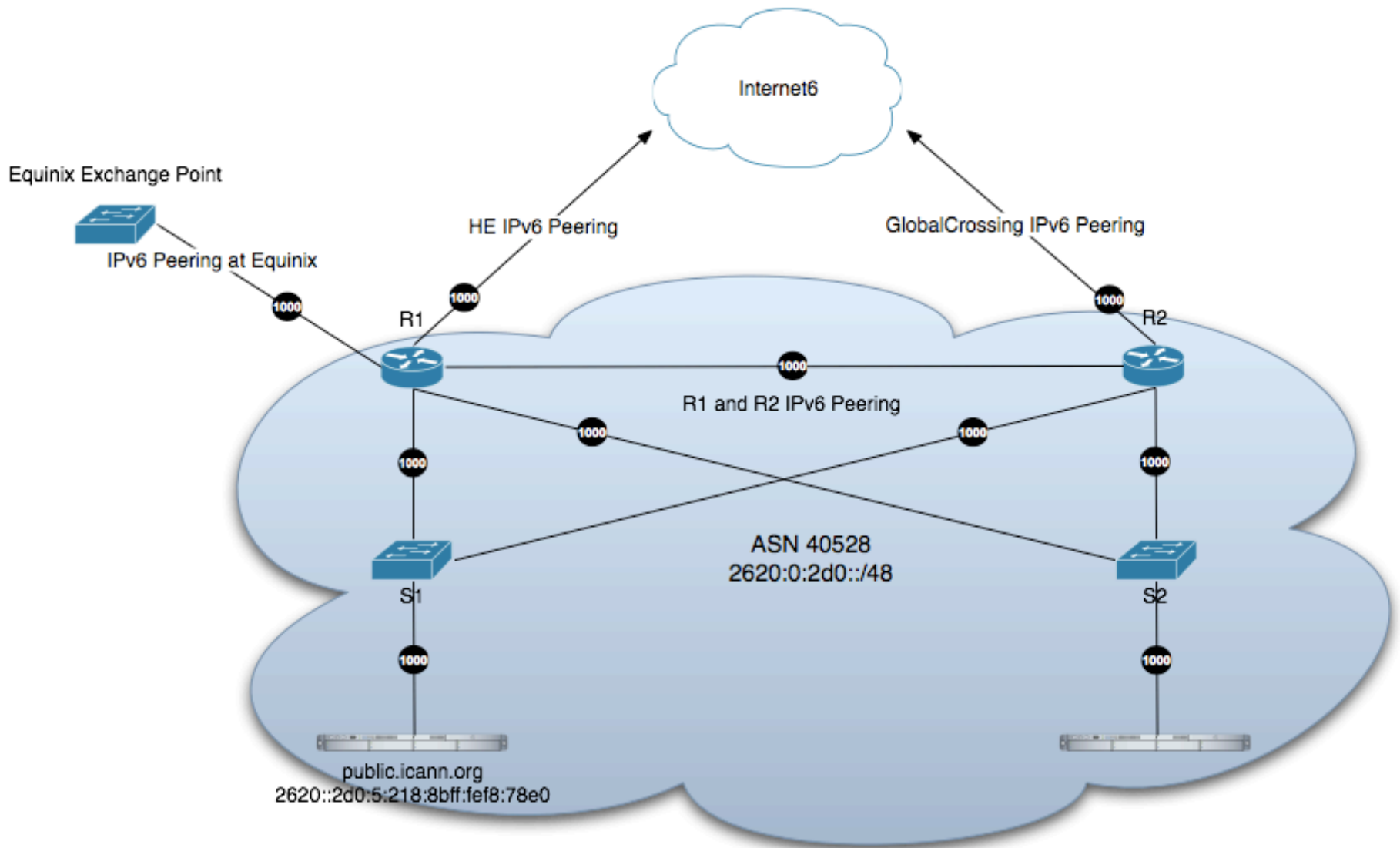
Where are we at IPv6 deployment?

- ICANN Network AS40528 is %100 IPv6 ready.
  - Multi-homed with 2 transit providers
    - 3rd transit is being added to for high availability.
  - Peering via Equinix Los Angeles Exchange Point with 40+ participants. (July 2007)
  - Most ICANN Services will be reachable via IPv6 before October 2007.

Questions?