Hosting Providers and IPv6

Hosting Providers

- **Managed Service Providers and Hosting Providers are an often overlooked player**
    - Neither a traditional ISP or a traditional Enterprise
    - Toolsets are often too large and too broad or not scalable enough.
- **Use a vast array of equipment**
    - Switches
    - Routers
    - Load Balancers
    - Firewalls
    - IDS/IDP and other Security Products
    - Servers
    - Accessory Equipment
        - PDU/KVM/Terminals
- **Often have standalone datacenters**
    - Often no nationwide/global Backbone

CARPATHIA
HOSTING, INC.

IPv6 and the Hosting Provider

- **Some ISP's are giving away IPv6 Transit**
- **Many ISP's support Dual Stack if you ask**
- **Existing Equipment Supports IPv6**
    - And has for some time
- **Its easy**
- **No reason not to**

Introduce an IPv6 Architecture

- **What is right for you?**
  - You know your existing architecture
- **Dual Stack**
  - Simply add IPv6 addresses to existing equipment
- **Parallel**
  - Deploy discrete infrastructure
- **Hybrid**
  - Discrete for some (Like WAN Routers)
  - Dual stack others (Core or Edge)

CARPATHIA
HOSTING, INC.

Servicing IPv6 vs Supporting IPv6

- **Servicing IPv6**
  - Process/Route IPv6 Traffic
- **Supporting IPv6**
  - Management functions
    - SNMP, SYSLOG, SSH, NTP

CARPATHIA
HOSTING, INC.

IPv6 Equipment

- **Routers**
    - Cisco and Juniper have supported IPv6 for ages
    - Probably have something lying around
- **Switches**
    - Ethernet Layer2 doesn't care
    - Management may be IPv4 only
- **Load Balancers**
    - F5
        - License on 1500 product line generation
        - Standard on 1600 product line generation
    - Citrix Netscaler
        - Standard on 9.x

IPv6 Equipment continued

- **Firewalls**
  - Cisco
    - PIX/ASA 7.0+
  - Juniper/Netscreen
    - Screen OS 5.0+
- **Security Products**
  - Snort
  - Juniper IDP
  - Gigamon
- **Non Compliant Devices**
  - IPv6 to IPv4 Address Translations

CARPATHIA
HOSTING, INC.

IPv6 Tools

- **Monitoring**
  - Nagios
- **DNS**
  - Bind
- **Mail**
  - Sendmail

Hosting Providers and ARIN

- **ISP vs End Users**
- **IPv6 and Multiple Discrete Networks (MDN)**
    - NRPM 6.11

Challenges

- **True IPv6 Only still difficult**
  - Management Services
  - Router ID

CARPATHIA
HOSTING, INC.