

Campus IPv6 Deployment

Derek Morr

The Pennsylvania State University
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I should preface this...

- I work for central IT, but not for the networking group.
- I'm not a network admin. I'm a programmer (sometimes).

- Status at PSU
- Issues so far
- Positive developments at PSU

Status at PSU

- 37 allocated /64s (4 outside of central IT)
- 1 (of 23) non-U. Park campus has requested IPv6
- University wiki is IPv6-enabled.

Status at PSU

- 2 of 6 root PSU DNS servers answer on IPv6.
 - 600 / 1067 sub-domains
 - 10 sub-domains have 100% IPv6 DNS
 - 1 unit outside of central IT has deployed IPv6 DNS.
- 2x NTP stratum 2 servers answer on IPv6
- 4 / 215 sub-domains have IPv6-enabled MX

Issues / Challenges

- Equipment replacement lifecycle
- IPv4 / IPv6 feature parity
- Training for admins
- Policy compliance for IPv6-only nodes
- Monitoring
- Software support and home-grown code

Successes

- 3 units outside of central IT has deployed IPv6
- 2 just let autoconf happen.
- The other:
 - IPv6'ified: www, dns, mx, ntp, kerberos, ldap, imap, ipp
 - 1 admin in 2 days

Successes

- Current IPv6 projects in central IT:
 - encrypted 3270 for mainframe access
 - IPv6-enabling the mirror server
 - IPv6 traffic monitoring

Reactions

- Finally, it's "When" not "If"
 - But still no sense of urgency.
- Discussion of security, but no good solutions.
- "IPv6 is a network issue."

The challenge with IPv6 is no longer the network. It's the applications and services.

Having said that, the network still needs some TLC.

IPv6 Committee

- High-level roadmap for IPv6 deployment.
- Buy-in from CIO, Deputy CIO and Sr. Directors.
- Participation from every unit in central IT.
- Just planning. Not (yet) doing.
- Happy to share more when we can.

Questions?