Enterprise Incremental IPv6

draft-ietf-v6ops-enterprise-incremental-ipv6
IETF86 Orlando

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Enterprise Incremental IPv6

• Guidance and considerations for Enterprises seeking to enable IPv6

• Phased approach
  – Preparation and Assessment Phase
  – External Phase
  – Internal Phase
  – IPv6 Only
IETF85 Atlanta Input

• Updates include comments/feedback from IETF85 (Atlanta)

• Key areas of discussion:
  – Tone of Document (for general reader consumption)
  – MTU Size Recommendation
  – Enterprise Interest to Deploy IPv6
  – Dual Stack / Tunneling text
  – Prefix Size vs. Site considerations
  – PI vs PA space text and considerations
  – NPTv6 Stances and possible recommendation
  – Add Guest Network, CDN sections
Intro Updates

— Introduction:
  • Additional text around benefits of IPv6 native and reference to draft-ietf-v6ops-design-choice along with RFC5375

— Section 1.1 – 1.2
  • Minor text updates in section 1.1 with some added text and reference to I-D.ietf-opsec-ipv6-implications-on-ipv4-nets in section 1.2
Assessment Phase - Updates

- **IPv6 vs. IPv4 security**
  - Specific text that IPv4 and IPv6 need to be considered along with interaction between protocol in dual stack

- **Security Issues with IPv6 section**
  - Remove M-Bit text (setting to force DHCPv6) and addition of text about harvesting of IP/MAC associations for IPv6
  - Text around ARP, ND and issues to consider
Assessment Phase - Updates

- Added Routing Section
  - Text around assessment of IPv6 IGP needs including IS-IS, OSPF, RIPng with deltas noted
  - Reference to v6ops-design-choides

- Address Planning
  - Text noting consideration if using ULAs
  - Text describing the considerations around PI and PA space usage (fees, renumbering, multihoming, routing interaction, and site addressing)
External Phase - Updates

– Connectivity
  • Modified original text around PI and PA space (to a large extent)
  • New text provides clearer information on routing (i.e. BGP, RIR considerations etc)
  • New text around ULA usage with NAT considerations (may require discussion in WG given recent debates)

– Server and Applications
  • New text, with discussion around path analysis (IPS, Firewall, SLB, NAT64)
Internal Phase - Updates

– Moved security section to top of phase
– Network Infrastructure
  • SLACC still useful for Workstations
  • RAs still needed with DHCPv6 operation (no DF option)
– End User Devices
  • Happy eyeballs reference
  • Correctly monitor IPv6
– Content Delivery Networks
  • Added text with reference to ICP Guidance draft (now RFC as of last week – RFC6883)
– Data Center Virtualization
  • Reference to I-D.lopez-v6ops-dc-ipv6
Summary

- Feedback on new text and content updates, adds and deletes

- Update document

- WGLC following IETF86