

IPv6 Enterprise Scenarios Brainstorming Session

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Plan of Action

- 1- Establish drivers that would make an enterprise interested in IPv6 (Migration benefits), Brainstorm ideas
 - Get to the 80% coverage approach,
- 2- Evaluate new / existing scenarios

Enterprise Drivers/ Reasons for IPv6

- Better Address Space Economics
 - Address depletion in geographic pockets
 - Support new devices/technologies that drive up address usage
 - Support applications that require global addresses (P2P)
- Simplified Mobility Model
 - Seamless roaming
- Simplified Operation Model
 - Network and end device renumbering
 - Reduced reliance on DHCP
- Security
 - End to end packet integrity
 - Integrated IPSec
- IPv6 development
- New IPv6 and the 'killer app'

Enterprise Building blocks

Note well: Arbitrary order

- Internet data center
 - server farm
- Intranet data center
 - server farm
- VPN infrastructure
- WAN Corporate backbone
- WAN extranet
- LAN (single site, single routing domain)
- Network edge devices or perimeter (firewall, mail proxy etc)
- Connectivity - Multi-ISP
 - Multi addresses
- Applications Inventory
- Audit / Understanding the network mapping

Call for more Scenarios outside

- Attempted to list some more scenarios
- Internet Data center – providing access to IPv6 apps/ IPv4 apps across ISPs (IPv4 and or IPv6)
 - Outgoing/incoming access
 - Cross of perimeter
- Outsourced all / most of corporate backbone and desire to deploy native IPv6
- Simpler case - Entire enterprise move to v6
- Call for more scenarios

Brainstorming Session Outcome

- Try to order the scenarios by complexity
 - Difficulty to define complexity
- Decided to not order the building blocks
- Generate a matrix of building blocks versus scenarios
 - How they apply to different scenarios—
 - single building/single location
 - campus environment/single location
 - campus environment/multiple locations

Connectivity Models / use the building blocks to Create Scenarios

- Hostv6 / Nodev6 / Devicev6 etc
 - on v4 LAN
 - on v6 LAN
- LANv6 (island) to LANv6 (island)
 - over v6
 - over v4/v6
- LANv6 (island) to LANv4 (island)
 - over v6
 - over v4/v6

Simplest Scenario

- Single location (in an IPv4-constrained region)
- Don't have a perm globally routable v4 address
 - Don't have infrastructure for a server
 - For e.g. need "permanent" address, need peer-to-peer
- Solution is to go to IPv6