

Transitioning to IPv6

- Jeffrey Barnard
Barnard Software, Inc.
- <http://www.bsiopti.com>
- jeff@bsiopti.com
- 407-323-4773, 407-688-7123 (support)

Overview

- The Reasons and the Challenges
- The Business Case
- The Technical Case
- The Training

Reasons and Challenges

- IPv4 address pool running out
 - Life extended by NAT
 - Projected to be 2H 2011
- Is this like Y2K?
 - No. Your business will keep on running
- But, how will you communicate with ...
 - Government, customers, business, banks

Reasons and Challenges

- Workarounds will be required
- Workarounds cost money
 - Support
 - Maintenance
- Workarounds become expensive over time

Reasons and Challenges

- It is not *If* IPv6 but *When*
- Plenty of time available
- Plan, Plan, Plan

- Look at the Business Case
- Look at the Technical Case
- Look at the Training needed

The Business Case

- Why Adopt IPv6?
 - Business Continuity
 - Exploit 'Internet Enabled' Devices
 - Government Requirements
 - Customer demands
 - Global Communications
 - Supply Chains/Supplier Chains

The Business Case

- Application Support for ...
 - Seamless mobility
 - Ad-Hoc Networking
 - Control and Sensor Applications
 - Home Networks and Devices
 - Personal Networks and Devices
 - Secure Peer-to-Peer Applications
 - IP Multimedia Systems

The Business Case

- Benefits
 - Increase Business Opportunities
 - Improvement Network Efficiency
 - Cost Savings
 - Improve Network Performance
 - Simplify Operations (auto-configuration)
 - Provide Strategic Advantages

The Business Case

- Costs
 - Planning and Engineering
 - Infrastructure Changes and Upgrades
 - Hardware
 - Software
 - Operational Support
 - Personal Training

The Business Case

- Risks
 - Business
 - Legal
 - Technical
 - Interoperability

The Business Case

- Transition Group
 - Identify the Members
 - Build Awareness
 - Leverage Executive Authority
 - Establish a Governance Structure
 - Identify Impacted Areas
 - Go to it!

The Technical Case

- Inventory ALL IP Aware Assets
 - Address Allocation Needs
 - Networks (IP, DSL, Wireless, VoIP, CPE)
 - Network Services (DNS, DHCP, AAA, NTP, etc)
 - Network Management (MIBS, SNMP, Netflow, etc.)
 - Applications (Clients, Servers, Databases, etc.)
 - Services
 - Operational and Business Support
 - Any IP based/aware service

The Technical Case

- IPv6 Addressing Plan
 - IPv6 Addressing Needs
 - Allocation for Users needs?
 - Allocation for Routing?
 - PI IPv6 Prefix vs. PA IPv6 Prefix?
 - Independent vs. Aggregatable
 - Stateful vs. Stateless Auto-Configuration
 - Multiple prefix address (per NIC) management

The Technical Case

- IPv6 Routing
 - Changes to current routing
 - IPv4 and IPv6 routing concurrently
- IPv6 Interconnectivity
 - Internet connectivity
 - ISP Support
 - End User Support

The Technical Case

- Transition Mechanism
 - Dual Stack
 - Tunneling
 - Translation
 - Services (DNS, DHCP, NTP, etc.)

Training

- Awareness Training
 - Generalized IPv6 Information
- Architectural Training
 - Detailed IPv6 Information
- Operational Training
 - Job Specific IPv6 Information
- Specialized Training
 - Advanced IPv6 Information

Transitioning to IPv6

- Questions ...

Transitioning to IPv6

- Thank You!
- Jeffrey Barnard
Barnard Software, Inc.
- <http://www.bsiopti.com>
- jeff@bsiopti.com
- 407-323-4773, 407-688-7123 (support)