# NIST

In 2005, the White House Office of Management and Budget (OMB) directed the National Institute of Standards and Technology (NIST) to develop standards and testing necessary to support adoption of IPv6 by US Government agencies. The NIST project is known as USGv6. NIST has developed a technical standards profile for US Government acquisition of IPv6 hosts and routers, and a specification for network protection devices. NIST is also actively establishing a testing program in order to test the compliance of products and vendors with the profile.

## NIST IPv6 Documentation

- IPv6 Economic Impact Assessment, RTI International for NIST (Oct. 2005)

### USGv6 Profile

- NIST: Special Publication (SP) 500-267: A Profile for IPv6 in the U.S. Government - Version 1.0, July 2008
- NIST Issues Draft IPv6 Technical Profile, NIST 2/6/2007
  - Frequently Asked Questions list
  - 2007-01-31 Announcement of public comment period on Draft 1
- Second Draft Profile
  - Notice : NIST has released a second draft of a proposed standards profile to support the implementation of Internet Protocol Version 6 (IPv6) by government agencies. NIST developed the "profile" to help ensure that IPv6-enabled federal information systems are interoperable, secure and able to co-exist with the current IPv4 systems. An initial draft of the NIST profile was released for comment one year ago (see "NIST Issues Draft IPv6 Technical Profile" ). The second draft of A Profile for IPv6 in the U.S. Government - Version 1.0 develops a long-term strategy for 2010 and beyond. It incorporates the feedback from meetings with industry and government groups and input including more than 500 comments. The profile recommends technical standards for common network devices, such as hosts, routers, firewalls and intrusion detection systems. It also outlines the compliance and testing programs that NIST will be establishing to ensure that IPv6-enabled federal information systems are interoperable and secure, and that they work with existing IPv4 systems. NIST is calling for comments on the draft report by Feb. 29. For more information on the profile and to contribute comments, go to www.antd.nist.gov/usgv6 .

### Security

- Special Publication 800-119, Guidelines for the Secure Deployment of IPv6 This document is intended to help with the deployment of the next generation Internet Protocol, IPv6. It describes and analyzes IPv6's new and expanded protocols, services, and capabilities, including addressing, DNS, routing, mobility, quality of service, multihoming, and IPsec. For each component, there is a detailed analysis of the differences between IPv4 and IPv6, the security ramifications and any unknown aspects. It characterizes new security threats posed by the transition to IPv6 and provides guidelines on IPv6 deployment, including transition, integration, configuration, and testing. It also addresses more recent significant changes in the approach to IPv6 transition. Dec. 28, 2010
  - Feb. 22, 2010 SP 800-119 DRAFT Guidelines for the Secure Deployment of IPv6
- Secure Domain Name System (DNS) Deployment Guide

### Testing

- NIST: Special Publication (SP) 500-273: IPv6 Test Methods: General Description and Validation - Version 1.0, August 2009
- 2007-05-04 IPv6 Testing Meeting Presentation Materials
- 2007-04-17 Federal Register Announcement of IPv6 Testing Meeting

## NIST Presentations

- Doug Montgomery, IPv6: Hope, Hype and (Red) Herrings, NIST (2006) (presentation on the promise and misunderstandings surrounding IPv6)

## References

- CIO Council IPv6 Transition Guidance Sec. 5.2.6.1 "As the Federal government technical standards-making body, NIST will work with OMB and the IPv6 Working Group to evaluate the need for common standards and technical guidance. NIST will work with stakeholders to ensure any standards/guidance developed is in alignment with existing industry standards and is in the best interest of the Federal

government. Furthermore, NIST will provide the IPv6 Advisory Group and OMB with additional guidance as necessary and maintain representation on the IPv6 Advisory Board."

- OMB Memorandum 05-22 - Transition Planning for Internet Protocol Version 6 (IPv6) (August 2, 2005) ("The National Institute for Standards and Technology (NIST) will develop, as necessary, a standard to address IPv6 compliance for the Federal government.")