



United States Department of the Interior

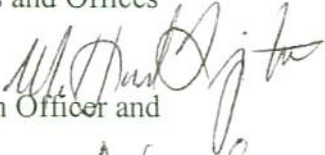
OFFICE OF THE SECRETARY
Washington, DC 20240



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OCIO Directive 2005-001

To: Heads of Bureaus and Offices

From: W. Hord Tipton 
Chief Information Officer and

Debra E. Sonderman 
Director, Office of Acquisition and Property Management

Subject: Internet Protocol Version 6 (IPv6)

Purpose:

This Directive provides policy for Department-wide deployment of IPv6 including target milestone dates.

Background:

Currently, Internet Protocol version 4 (IPv4) represents the mandated internetworking protocol for the DOI. Future DOI platforms and information technology capabilities depend on effective implementation of IPv6 in concert with other aspects of the enterprise architecture.

IPv6 is the next generation network layer protocol of the Internet as well as the DOI internal network. Implementation of IPv6 is necessary due to fundamental limitations in the current IPv4 protocol that renders IPv4 incapable of meeting long-term requirements of the commercial community and DOI. IPv6 is designed to overcome those limitations by expanding available IP address space to accommodate the worldwide explosion in Internet usage, improving end-to-end security, facilitating mobile communications, providing new enhancements to quality of service, and easing system management burdens. Furthermore, IPv6 is designed to run well on the most current high performance networks and without experiencing a significant decrease in capacity on low bandwidth systems.

While the precise timing and speed of commercial deployments utilizing IPv6 are uncertain, it is expected to replace IPv4 over the next several years. The significant installed base of IPv4 technology at DOI will result in a transition period where both protocols will coexist. Therefore, a transition to IPv6 presents DOI with a number of opportunities and challenges to be addressed through an overall enterprise transition strategy. The IPv6 transition across DOI will consider operational requirements,

information assurance and costs, while maintaining interoperability within the Department, across the Federal Government, and with partners in the commercial sector. This memo provides the guidance to ensure that a DOI transition occurs in an integrated, timely and effective manner.

Scope:

This directive applies to all Department of the Interior (DOI) office and bureau information technology (IT) assets (i.e., hardware and software) that are capable of utilizing or are dependent on Internet Protocol (IP) technology. For more information on IPv6 and dependent technologies, please visit www.IPv6.org

Policy:

As required by OMB, this policy supplements the Department's Information Resources Management (IRM) strategic plan, the E-Gov Strategy, on an interim basis until revisions are formally accepted, as described in the E-Government governance framework.

The transition to IPv6 across the DOI shall be integrated into the Capital Planning and Investment Control (CPIC) process and the life-cycle management for affected IT investments and incorporated into the Interior Enterprise Architecture as described below.

- Effective immediately, all information technology (IT) assets that are capable of utilizing or are dependent on IP technology that are being planned, designed, developed, procured or acquired must meet IPv6 standards when IPv6-compliant products are commercially available. In addition, these IT assets shall maintain interoperability with IPv4 systems/capabilities for transition purposes. Solicitations that have already been issued should be modified if time and other resources permit. If offers have been received, cancel and resolicit only if it is in the best interest of the Government.
- Effective immediately, all Statements of Work/Statements of Objectives (SOWs/SOOs) for IT assets that are capable of utilizing or are dependent on IP technology must require compliance with IPv6, unless market research conclusively shows that such products are not yet available. If there is doubt as to availability, IPv6 compatibility may be a technical evaluation factor instead of a firm requirement. Those responsible for creating, reviewing and enforcing SOWs/SOOs are to be guided by the requirements of this memo. For more information on dependent technologies refer to <http://www.ipv6.org>
- Effective immediately, transition to IPv6 technology must be integrated into the lifecycle management (e.g., planning, design, development, acquisition) and capital planning (new investments, development/modernization/enhancement (D/M/E), and technology refresh) for applicable IT investments and cited in the respective documentation including the Exhibits 300 and 300-1.

- Within six months, all bureaus and affected offices will assess the full scope and impact of this directive. Each bureau will provide the Office of the CIO a current assessment of their infrastructure, including the servers, operating systems, and network hardware, along with their recommendation for migration to IPv6.
- Within six months, the DOI CIO, in conjunction with the Bureau CIOs, will lead the evaluation of product lines to determine the level of compliance with IPv6 standards.
- The DOI Technical Reference Model (TRM) will be updated to reference the IPv6 standard and identify IPv6-compliant products for use within DOI.

Contact:

Please contact Mr. Tipton at 202-208-6194 or Ms. Sonderman at 202-208-6352. Staff may contact Mr. Timothy Quinn, Infrastructure Management Division Chief, at 703-487-8551.

cc: Bureau and Office CIOs
Bureau and Office Procurement Chiefs