Internet Protocol Version 6 (IPv6) Policy

Data and Information Technology

May 2021

Review Dates

The Chief Information Officer or his designee must approve any exception to this policy or related procedures.

Document Version Control

Version	Created By	Edited By	Date	Change Summary
1.0	Jerry Carter	Jerry Carter	5/19/2021	Initial version

Approval

This policy is effective on the date signed below.

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Jerry Carter, CDIO   Date
Chief Data & Information Officer

Overview

This document, which applies to Internet Protocol Version 6 (IPv6), sets forth the Morris K. Udall and Stewart L. Udall Foundation (Udall Foundation) policy for IPv6 deployment and implementation. This policy governs the requirements for completing the operational deployment of IPv6 and captures considerations for transitioning from the current dual-stack IPv4/IPv6 environment in accordance with the Office of Management and Budget (OMB) Memorandum M-21-07 requirements. It defines the governance and support for the ongoing use and future development of IPv6. The Udall Foundation's Data and Information Technology team, led by the agency's Chief Data and Information Officer (CDIO), is responsible for this policy.

The main advantages of IPv6 are:

- Expanded addressing capability;
- Security extensions for authentication and privacy;
- Flow labeling capability;
- Improved efficiency in routing and packet handling;
- Support for auto-configuration and plug-and-play capabilities;
- Support for embedded IP security;
- Elimination of the need for Network Address Translation (NAT);
- Support for widely deployed routing protocols;
- Network efficiency and bandwidth conservation, and
- Transition and interoperability mechanisms that allow users to deploy IPv6 incrementally.

References and Authorities

This policy is written in accordance with OMB Memo M-21-07, *Completing the Transition to Internet Protocol Version 6 (IPv6)*, effective November 19, 2020.

Policy

No later than the end of Fiscal Year (FY) 2023, all new networked Udall Foundation information systems will be IPv6-enabled at the time of deployment (the use of IPv6 is "turned on" for production use). This commitment reflects the Udall Foundation's strategic intent to phase out the use of IPv4 for all systems.

IPv6 Project Team

The Udall Foundation has established a primary IPv6 governance project team that assesses, prioritizes, and approves requirements that will meet the IPv6 standards. The project team consists of acquisition, policy, technical, and cybersecurity stakeholders. The project team facilitates the IPv6 pilot system and all related activities. Continuous monitoring will be leveraged to support the IPv6 pilot deployment and to identify requirements needed to develop an implementation plan. All transition activities from dual-stack IPv4/IPv6 to full IPv6 must meet OMB-defined timelines and established agency data and information technology governance, including enterprise risk management. The project team determines further recommendations on IPv6 hardware and software requirements as appropriate.

IPv6 Infrastructure Implementation

The project team shall develop an IPv6 implementation plan. This plan shall include transition details that provide direction regarding processes for new procurements.

Ensuring Adequate Security

The DCDIO shall establish plans to fully support IPv6 services in IT security plans, enterprise architecture, and acquisitions. All systems that support network operations and/or enterprise security services shall be IPv6-capable and operate in IPv6-only environments. The CDIO shall monitor and manage compliance with all applicable Federal guidance and leverage industry best practices, as appropriate, to secure the deployment and operation of IPv6 networks. All security and privacy policy assessments, authorizations, and monitoring processes shall address the production use of IPv6 in Federal information systems.

Contact
For further information about this policy, please send inquiries to the Udall Foundation CDIO at itsupport@udall.gov.