MEMORANDUM FOR BUREAU CHIEF INFORMATION OFFICERS

FROM: Eric Olson Eric R. Olson
Digitally signed by Eric R. Olson
Date: 2021.05.19 17:21:42
-04'00'
Deputy Assistant Secretary for Information Systems
& Chief Information Officer

SUBJECT: Guidance for the Transition to Internet Protocol Version 6 (IPv6)

There has long been an effort in the world to enable and migrate to a newer version of the Internet Protocol. The Federal Government has been undertaking a planned transition to version 6, often referenced as IPv6. This memorandum describes the transition goals of the Department, provides reference to Government policy promulgated by the Office of Management and Budget (OMB), and provides specific guidance related to the Department's acquisition and management of Information Technology to ensure that our IPv6 transition goals are met.

Background

IPv6 is the next-generation Internet Protocol, designed to replace IPv4 that has been in use since 1983. IP addresses are the globally unique numeric identifiers necessary to distinguish individual entities that communicate over the Internet. The global demand for IP addresses has grown exponentially with the ever-increasing number of users, devices, and virtual entities connecting to the Internet, resulting in the exhaustion of readily available IPv4 addresses in all regions of the world. Over time, numerous technical and economic stop-gap measures have been developed in an attempt to extend the usable lifetime of IPv4, but all of these measures add cost and complexity to network infrastructure and raise significant technical and economic barriers to innovation. It is widely recognized that full transition to IPv6 is the only viable option to ensure future growth and innovation in Internet technology and services.

In August 2005, OMB issued M-05-22, Transition Planning for Internet Protocol Version 6 (IPv6), requiring agencies to enable IPv6 on their backbone networks by June 30, 2008. This policy outlined deployment and acquisition requirements. In September 2010, OMB issued memorandum, Transition to IPv6, requiring Federal agencies to operationally deploy native IPv6 for public Internet servers and internal applications that communicate with public servers. Specifically, the 2010 memorandum required agencies to upgrade public/external facing servers and services (e.g., web, email, DNS, ISP services, etc.) to operationally use native IPv6 by the end of FY 2012; and to upgrade internal client applications that communicate with public Internet servers and supporting enterprise networks to operationally use native IPv6 by the end of FY 2014. In November 2020, OMB issued M-21-07, Completing the Transition to IPv6 with additional goals to move the Federal Government to an IPv6-only mode of operation.

Scope

This document provides guidance related to the transition goals of the Department, and changes to Federal and Department acquisition policy related to IPv6. Bureau Chief Information Officer (CIO)s and IT organizations within the Department should familiarize themselves with this guidance and ensure that their efforts are aligned with it.

Treasury IPv6 Transition Goals

Treasury intends to conduct an orderly transition to the use of IPv6, in alignment with the OMB M-21-07. Specific goals and targets related to the IPv6 transition are:

Deployment of IPv6 to Treasury Wide Area Network (WAN) and Treasury Sites

The Treasury is beginning a transition of its Wide Area Network (WAN) to the General Service Administration's Enterprise Infrastructure Solutions contract in Fiscal Year (FY) 2021. IPv6 transport will be provided on the new WAN, and all sites will have implemented IPv6 transport on Local Area Networks by the time the WAN transition is complete.

IPv6-Enablement on New Information Systems During Fiscal Year 2023

Beginning in FY 2023, all new Treasury Information Systems shall be IPv6-enabled before going live. Additionally, any existing IPv4-only Treasury Information Systems shall have a published target date for transition to IPv6, and that target date shall be no later than the end of FY 2025, unless the appropriate bureau CIO issues a waiver in coordination with the Treasury CIO.

Retiring of Internet Protocol Version 4 (IPv4)

Treasury desires to retire the use of IPv4 where possible, switching to IPv6-only where such a mode of operation will not interfere with the Treasury's mission of providing service to the public. Treasury's goal is to have a significant portion of its IP-enabled assets operating in IPv6-only environments by the end of FY 2025.

Treasury IPv6 Transition Management Structure

This memorandum designates the Associate CIO for Infrastructure and Operations (ACIO/IO) as the Executive Sponsor of Treasury's IPv6 Integrated Project Team (IPT) to coordinate these actions. The IPv6 IPT is responsible for developing and overseeing Treasury's overall IPv6 transition plan which shall be inclusive of strategies, acquisitions, processes, status, and milestones. The ACIO/IO shall designate the IPT Lead, and Treasury Bureaus will be expected to assign personnel to the Treasury IPv6 IPT. Additionally, IT system owners shall ensure system documentation details plans for transitioning to IPv6 and that these plans align with the Department's overall IPv6 Implementation Plan.

Treasury IT Acquisition policy related to IPv6

It is very important that all Information Technology Goods and Services acquired by the Department be fully capable of operating in an IPv6 environment. Therefore, unless a waiver is issued by the CIO of the corresponding bureau, in coordination with the Treasury CIO, all Treasury acquisitions for IT goods and services shall comply with Federal Acquisition Regulation 11.002(g) and Department of the Treasury Acquisition Procedure 1011.002(g), ensuring that the requirements documents includes references to the appropriate technical capabilities defined in the most current Profile for IPv6 in the U.S. Government (USGv6 Profile) and the corresponding declarations of conformance defined in the most current USGv6 Test Program Guide.

If you or your bureau IPv6 coordinator have any comments or questions, please contact Tony Arcadi at Tony.Arcadi@treasury.gov or Timothy Metzinger at Timothy.Metzinger@treasury.gov.