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Policy Directive 140-14

MEMORANDUM FOR:

Distribution

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Deputy Under Secretary for Management

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SUBJECT:

DHS Transition to Internet Protocol Version 6 (IPv6)

This Policy Directive defines the Department of Homeland Security (DHS) activities and provides roles and responsibilities to ensure compliance with the [Office of Management and Budget \(OMB\) Memorandum M-21-07, "Completing the Transition to Internet Protocol Version 6 \(IPv6\)."](#) In November 2020, OMB released M-21-07, to ensure DHS transitions to IPv6-only networked systems and infrastructure. M-21-07 rescinds M-05-22, *Transition Planning for Internet Protocol Version 6 (IPv6), August 2, 2005* and *Transition to IPv6*, dated September 28, 2010. This Policy Directive is not applicable to National Security Systems.

OMB Memorandum M-21-07 requires the DHS Cybersecurity and Infrastructure Security Agency to: collaborate with the Department of Commerce to enhance security guidance and operational directives for IPv6 adoption throughout the Federal Information Technology (IT) infrastructure; enhance relevant security and resilience programs and services to fully support the production use of IPv6 in all Federal IT systems; and enhance the ability to measure and report on the extent of IPv6 and IPv4 deployment and utilization levels within Federal information systems. In turn, OMB M-21-07 requires that DHS also take action for its own information technology internally. Accordingly, I am directing the DHS Chief Information Officer (CIO) and Component CIOs to implement the following:

A. The DHS CIO shall:

1. Establish and lead the Management Directorate's IPv6 Integrated Project Team (IPT) to provide governance for the requirements of this section, as well as report progress upon IPv6 utilization, transition progress, and metrics consistent with this Policy Directive;
2. Identify, complete, and document the results of a DHS-wide IPv6 pilot by end of FY 2021;
3. Coordinate with the Office of Program Accountability and Risk Management and the Office of the Chief Procurement Officer (OCPO), to ensure all new and planned DHS Headquarters and Management Directorate networked Federal information systems are IPv6-enabled prior to being made operational, no later than FY 2023;

4. Update the Information Resources Management Strategic Plan, to transition all existing networked DHS information systems to fully enable IPv6 operation, as appropriate, no later than the end of FY 2021;
5. Coordinate with the OCPO to provide a DHS-wide process and case-by-case criteria for waivers granted by the DHS CIO, consistent with all requirements and conditions within OMB M-21-07;
6. Develop a DHS-wide Implementation Plan (IP) with input from Components (see paragraph A.15) to phase out use of IPv4 for all existing networked systems on Federal networks by either converting to IPv6-only or replacing or retiring systems. The Implementation Plan shall be completed by the end of FY 2021;
7. Coordinate with external partners and other entities as needed to identify systems that interface or interoperate with existing networked Federal information systems, and develop plans to migrate all such interfaces and backend infrastructure to the use of IPv6-only;
8. Upgrade public/external facing servers and services (e.g., cloud service providers, web, email, DNS, and ISP services), and internal client applications that communicate with public internet services and supporting DHS networks to utilize native IPv6 across all operations;
9. Ensure continuity of legacy Internet-based services are not denied to the public that DHS serves, by maintaining public-facing IPv4 interfaces and transition mechanisms at the edge of service infrastructures to support interaction of IPv4-based non-DHS-users with the DHS IPv6-only backend infrastructure, until they are no longer required¹;
10. Ensure all new DHS Headquarters and Management Directorate IPv4-enabled networked systems not receiving a waiver are operationally transitioned to IPv6 by the end of FY 2023;
11. Coordinate with the Component CIOs and Component Acquisition Executives (CAE) to ensure DHS-wide requirements documents contain Federal IPv6 acquisition requirements as specified in Federal Acquisition Regulation Part 11, including reference to the appropriate technical capabilities defined in the USGv6 Profile (National Institute of Standards and Technology Special Publication 500-267) and the corresponding declarations of conformance defined in the USGv6 Test Program. Potential vendors are required to document compliance with such IPv6 requirement statements through the USGv6 Test Program;

¹ OMB M-21-07, Page 2, Footnote #4: "Note that for public Internet services, maintaining viable IPv4 interfaces and transition mechanisms at the edge of service infrastructure may be necessary for additional time, but this does not preclude operating the backend infrastructure as IPv6-only."

12. Coordinate with the Joint Requirements Council, DHS Chief Financial Officer, and other CAE members for resource requirements and implementation needs exceeding beyond current program and contract resource allocations; and
13. Ensure the DHS IPv6 IP includes all milestones consistent with OMB guidance on IPv6. This includes, but is not limited to:
 - a) At least 20% of IP-enabled assets on DHS networks operating in IPv6-only environments by the end of FY 2023;
 - b) At least 50% of IP-enabled assets on DHS networks operating in IPv6-only environments by the end of FY 2024;
 - c) At least 80% of IP-enabled assets on DHS networks operating in IPv6-only environments by the end of FY 2025; and
 - d) Identification and justification of DHS information systems that cannot be converted to use IPv6 with inclusion of a schedule for replacing or retiring these systems.

B. The Component CIOs shall:

1. Engage and assist the DHS CIO with carrying out all responsibilities / requirements within this memorandum, by the deadlines and milestones established;
2. Nominate appropriate Component point of contacts with the authority and decision-making ability to represent their Component at the DHS IPv6 IPT;
3. Develop applicable Component-level policies and procedures in alignment with DHS Office of the Chief Information Officer policies and procedures to provide Component-specific guidance, as needed;
4. Develop the Component-level input towards the DHS IPv6 Implementation Plan by end of FY 2021 to meet DHS OCIO activities defined in this policy;
5. As needed, establish and complete Component IPv6 pilots by end of FY 2021;
6. Ensure all new Component IPv4-enabled networked systems not receiving a waiver are operationally transitioned to IPv6 by the end of FY 2023; and
7. Report Component progress upon IPv6 utilization, transition progress and metrics at the DHS IPv6 IPT.

More information about the implementation of these requirements will follow. Please direct all questions regarding this Policy Directive to Eric Hysen, DHS CIO.