

# IPv6 RA IPv6-Only Flag

**<draft-ietf-6man-ipv6only-flag-05>**



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# Changes Since IETF103



- draft-ietf-6man-ipv6only-flag-05 (2019-March-7)
  - Added a host configuration option to Section 7 that controls if the host should process the IPv6-Only flag. This provides local control over using the use of flag and reduces the ability of a bad actor to turn off IPv4 for hosts that support the flag.
  - Changed Section 7 to specify that the host can ignore flag set to 1 if it has active IPv4 configuration obtained from the network (e.g., via DHCP). Similar changes to Section 3 and Section 9
  - Clarification in Section 6 to strengthen the text about the administrators intent.
  - Added Bjoern Zeeb as an author.
  - Updated information on FreeBSD implementation in Appendix A.1
  - Editorial changes.

# Implementation and Testing



- FreeBSD Implementation by Bjoern Zeeb
  - <https://wiki.freebsd.org/IPv6/IPv6OnlyRAFlag>
- Test using Scapy
  - <https://samsclass.info/124/proj11/proj9xN-scapy-ra.html>
  - Verified that setting this flag did not cause any adverse effects on Windows 10 and Android.
- Linux and Tcpdump/wireshark by Loganaden Velvindron

# Issues Raised



- Will be used by bad actor to turn off IPv4 on IPv4-Only link
  - Added host configuration that controls if the host should process the IPv6-Only flag. This provides local control over using the use of flag and reduces the ability of a bad actor to turn off IPv4 for hosts that support the flag.
  - Changed text to specify that the host can ignore flag set to 1 if it has active IPv4 configuration obtained from the network (e.g., via DHCP).
- Other security issues
  - Shares issues with Neighbor Discovery, DHCPv4, DHCPv6, ARP, etc.
  - Access to link layer allow for many kinds of attacks, this doesn't change it for better or worse.

# Next Steps



- Authors think it is ready to advance
  - Implementation experience shows it is feasible and doesn't disrupt legacy IPv6 implementations
  - Reasonable protection for security issues
  
- Next steps?



# QUESTIONS / COMMENTS?