DRAFT-IETF-6MAN-IPV6ONLY-FLAG

IPV6 ROUTER ADVERTISEMENT IPV6-ONLY FLAG

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THIS DOCUMENT SPECIFIES A ROUTER ADVERTISEMENT FLAG

TO INDICATE TO HOSTS THAT THE ADMINISTRATOR HAS CONFIGURED THE ROUTER

TO ADVERTISE THAT THE LINK IS IPV6-ONLY.

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SOUNDS USEFUL?

- **The impact:**
  - This document therefore defines a mechanism that a router administrator can use to inform hosts that this is an IPv6-Only link on their default routers such that they can disable IPv4 on this link.

INTENDED BENEFITS

- **Avoid unnecessary layer 2 broadcasts**
  - ARP, DHCPv4, mDNS etc.
  - Lower roaming state for wireless controllers
  - Unnecessary packets drain battery
  - Unnecessary IPv4 probing drains battery
  - IPv4 might be used for malicious purposes

SCOPE OF THE FLAG

- Only default gateways can set it
- All default gateways must set it
- It's only a recommendation to the host

ALTERNATIVE SOLUTIONS

- **Some examples:**
  - Block ethertypes on switches
  - Signal with DHCPv4 (RFC2563)
  - Central management for hosts
- **These were seen as not sufficient**

WHY NOT SUFFICIENT?

- Operator may not control switches
- Operator may not control hosts
- Don't want DHCPv4 implementation

ARGUMENTS AGAINST

- **Alternative solutions *are* sufficient**
  - No control over switches & hosts, no DHCPv4 and desire to prevent unnecessary traffic?

- **Benefit/risk ratio**
  - Another IPv6 flag to learn and remember
  - Principle of Least Astonishment
  - Security risks (it's a kill switch, rogue RA)
  - Protocol stack/layer violation

DRAFT STATUS

- **Working group:** 6man
- **Last updated:** 2018-10-16
- **Stream:** IETF
- **Intended status:** Proposed Standard
- **State:** In WG Last Call

YOUR OPINION?