

Network Working Group  
Internet-Draft  
Updates: [rfc4861](#) (if approved)  
Intended status: Standards Track  
Expires: July 14, 2018

O. Troean  
Cisco Systems  
January 10, 2018

IPv6 ND PIO Flags IANA considerations  
draft-ietf-6man-ndpioiana-01

## Abstract

The Prefix Information Option in the IPv6 Neighbor Discovery Router Advertisement defines an 8-bit flag field with two flags defined and the remaining 6 bits reserved (Reserved1). [RFC 6275](#) has defined a new flag from this field without creating a IANA registry or updating [RFC 4861](#). The purpose of this document is to request that IANA to create a new registry for the PIO flags to avoid potential conflict in the use of these flags. This document updates [RFC 4861](#).

## Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF). Note that other groups may also distribute working documents as Internet-Drafts. The list of current Internet-Drafts is at <https://datatracker.ietf.org/drafts/current/>.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

This Internet-Draft will expire on July 14, 2018.

## Copyright Notice

Copyright (c) 2018 IETF Trust and the persons identified as the document authors. All rights reserved.

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<https://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must

Internet-Draft

January 2018

include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the Simplified BSD License.

## 1. Introduction

The Prefix Information Option in the IPv6 Neighbor Discovery Router Advertisement defines an 8-bit flag field with two flags defined and the remaining 6 bits reserved (Reserved1). [RFC 6275](#) has defined a new flag from this field without creating a IANA registry or updating [RFC 4861](#). The purpose of this document is to request that IANA to create a new registry for the PIO flags to avoid potential conflict in the use of these flags.

## 2. Current Prefix Information Option flags

Currently, the NDP Prefix Information Option contains the following one-bit flags defined in published RFCs:

```

      0 1 2 3 4 5 6 7
    +--+--+--+--+--+--+
    |L|A|R|Reserved1|
    +--+--+--+--+--+--+
  
```

Figure 1

L - On-link Flag [[RFC4861](#)]

A - Autonomous Address Configuration Flag [[RFC4861](#)]

R - Router Address Agent Flag [[RFC6275](#)]

Reserved1 - Reserved

## 3. Updates to [RFC4861](#)

This document updates [Section 4.6.2](#) "Prefix Information" of [[RFC4861](#)] to point to the new IANA registry that is created in this document.

Specifically: The current list of flags in the Prefix Information Option can be found in [IANA-TBD].

## 4. IANA Considerations

The IANA is requested to create a new registry for IPv6 ND Prefix Information Option flags. This should include the current flags in the PIO option. The format for the registry is:

Troean

Expires July 14, 2018

[Page 2]

Internet-Draft

January 2018

RA Option Bit	Description	Reference
0	L - On-link Flag	[RFC4861]
1	A - Autonomous Address Configuration Flag	[RFC4861]
2	R - Router Address Flag	[RFC6275]

Figure 2

The assignment of new flags in the PIO option header require standards action.

The registry for these flags should be added to:  
<http://www.iana.org/assignments/icmpv6-parameters>

## 5. References

### 5.1. Normative References

- [RFC4861] Narten, T., Nordmark, E., Simpson, W., and H. Soliman, "Neighbor Discovery for IP version 6 (IPv6)", [RFC 4861](#), DOI 10.17487/RFC4861, September 2007, <<https://www.rfc-editor.org/info/rfc4861>>.

### 5.2. Informative References

- [RFC6275] Perkins, C., Ed., Johnson, D., and J. Arkko, "Mobility Support in IPv6", [RFC 6275](#), DOI 10.17487/RFC6275, July 2011, <<https://www.rfc-editor.org/info/rfc6275>>.

Author's Address

Ole Troean

Cisco Systems  
Philip Pedersens vei 1  
Lysaker 1366  
Norway

Email: [ot@cisco.com](mailto:ot@cisco.com)

Troean

Expires July 14, 2018

[Page 3]