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IPv6 ND PIO Flags IANA considerations
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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 IANA to create a new registry for the PIO flags to avoid potential conflict in the use of these flags.

Status of This Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

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This Internet-Draft will expire on March 11, 2018.

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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 reservered (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 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:

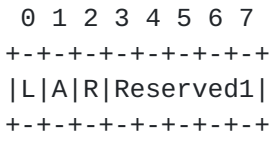

Figure 1

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 RFC4861 with the new IANA Considerations section specified below.

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:

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 or IESG approval.

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

5. References

5.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, DOI 10.17487/RFC2119, March 1997, <https://www.rfc-editor.org/info/rfc2119>.

[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>.

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