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IANA Considerations for IPv6 Neighbor Discovery Prefix Information Option Flags
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Abstract

The Prefix Information Option in the IPv6 Neighbor Discovery Router Advertisement message 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 a new IANA registry for the PIO flags. This document updates RFC 4861.

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1. Introduction

The Prefix Information Option (PIO) 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 to create a new registry for the PIO flags.

2. Current Prefix Information Option flags

Currently, the Neighbor Discovery Protocol Prefix Information Option [RFC4861] contains the following one-bit flags defined in published RFCs:

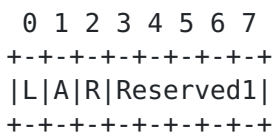

Figure 1

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 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 Neighbor Discovery 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]
3-7	Reserved	

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. Security Considerations

This document has no security considerations.

6. 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>.

[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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