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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.

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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 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.

[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

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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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