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YANG Data Model for IPv6 Neighbor Discovery
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Abstract

This document defines a YANG data model to configure and manage IPv6 Neighbor Discovery (ND) and related functions, including IPv6 address resolution, redirect function, proxy Neighbor Advertisement, Neighbor Unreachability Detection (NUD), Duplicate Address Detection (DAD), and Enhanced Duplicate Address Detection.

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1. Introduction

This document defines a YANG data model "ietf-ipv6-nd" to configure and manage IPv6 Neighbor Discovery (ND) and related functions, including IPv6 address resolution [RFC4861], redirect function [RFC4861], proxy Neighbor Advertisement [RFC4861], Neighbor Unreachability Detection (NUD) [RFC4861], Duplicate Address Detection (DAD) [RFC4862], and Enhanced Duplicate Address Detection [RFC7527].

Basic neighbor management functionality is supported by the "ietf-ip" YANG data model [RFC8344], and there is already a draft [I-D.ietf-intarea-arp-yang-model] extending the basic ARP YANG functionality to cover optional ARP features and related statistics, which applies only to IPv4. Thus, an extension for IPv6 is required to maintain the Neighbor Cache entries.

[RFC4861] specifies the Neighbor Discovery protocol for IPv6, and [RFC4862] specifies related functions. This document covers IPv6 address resolution [RFC4861], redirect function [RFC4861], proxy

Neighbor Advertisement [RFC4861], NUD [RFC4861], DAD [RFC4862], and Enhanced DAD [RFC7527]. Other function, such as Router and Prefix Discovery [RFC4861] are covered by submodule "ietf-ipv6-router-advertisements" in [RFC8349], and static neighbor cache entries and Stateless Address Autoconfiguration [RFC4862] are covered by module "ietf-ip" in [RFC8344].

The model is based on YANG 1.1 as defined in [RFC7950] and conforms to Network Management Datastore Architecture (NMDA) as defined in [RFC8342].

1.1. Terminology

The following terms are defined in [RFC8342]:

* configuration
* system state
* operational state

The following terms are defined in [RFC7950]:

* augment
* container
* data model
* data node
* leaf
* list
* module
* schema tree

The following terms are defined in [RFC4861]:

* Neighbor Discovery
* Neighbor Advertisement
* proxy Neighbor Advertisement
* Neighbor Unreachability Detection

The following term is defined in [RFC4862]:

* Duplicate Address Detection

* Stateless Address Autoconfiguration

The following term is defined in [RFC7527]:

* Enhanced Duplicate Address Detection

1.2. Tree Diagrams

Tree diagrams used in this document follow the notation defined in [RFC8340].

2. Design of the Data Model

The YANG data model for IPv6 ND augments the "ietf-ip" [RFC8344] to provide per-interface configuration and management of IPv6 address resolution and redirect functions based on the IPv6 ND protocol, as well as other related functions, including proxy Neighbor Advertisement, NUD, DAD, and Enhanced DAD.

Note that the features related to ICMP Router and Prefix Discovery are outside the scope of this module, since they have already been defined in the submodule "ietf-ipv6-router-advertisements" [RFC8349]. Static neighbor cache entries and stateless address autoconfiguration [RFC4862] are also out of the scope, as they are covered by "ietf-ip"[RFC8344].

2.1. IPv6 Address Resolution and Redirect Function

The data model augments the "/if:interfaces/if:interface/ip:ipv6" path defined in the "ietf-ip" module [RFC8344] for IPv6 ND protocol [RFC4861].

The "ns-interval" leaf defines the interval of retransmitting Neighbor Solicitation messages when a node tries to learn the link-layer address of another node.

The "redirect" leaf enables the sending of Redirect messages.

The "statistics" container defines a collection of interface-related statistics on IPv6 ND messages.

2.2. Neighbor Unreachability Detection

The "reachable-time" leaf defines the time to confirm a neighbor's reachability for NUD. A neighbor's state changes from REACHABLE to STALE when there is no other reachability confirmation from the neighbor within the "reachable-time".

The "ns-interval" leaf also indicates the interval for retransmitting Neighbor Solicitation messages used by NUD.

2.3. Proxy Neighbor Advertisement

The "proxy-na" leaf augmenting "ietf-ip" [RFC8344] defines the configurations of proxy Neighbor Advertisements [RFC4861], which indicate that a router is willing to accept packets not explicitly addressed to itself. After receiving a Neighbor Solicitation message whose destination address is not its own IPv6 address, a proxy router replies to the source with a Neighbor Advertisement message carrying its own link-layer address and the IPv6 address of the original destination.

2.4. Duplicate Address Detection

The "dup-addr-detect-transmits" leaf, as defined in "ietf-ip" [RFC8344], indicates the number of consecutive Neighbor Solicitation messages sent while performing Duplicate Address Detection (DAD) [RFC4862]. The value of "dup-addr-detect-transmits" can be set to 0 to disable DAD.

The "ns-interval" leaf also indicates the interval for retransmitting Neighbor Solicitation messages during DAD.

The "enhanced-dad" container augmenting "ietf-ip" [RFC8344] defines the configurations for enhanced DAD [RFC7527], which is used to automatically detect the looped-back IPv6 ND messages used in DAD.

The "auto-resolve" leaf enables automated action when a duplicate is detected. When enabled, a trusted router may log a system management message, drop the received ND message, and block the untrusted IPv6 host nodes from which the duplicate NS (DAD) or NA message was received.

2.5. IPv6 Neighbor Discovery Data Model

This document defines the YANG module "ietf-ipv6-nd", which has the following structure.

```
module: ietf-ipv6-nd

  augment /if:interfaces/if:interface/ip:ipv6:
    +--rw nd
       +--rw reachable-time?   uint32
       +--rw ns-interval?      uint32
       +--rw redirect?         boolean
       +--rw proxy-na?         boolean
       +--rw enhanced-dad
       |  +--rw enable?         boolean
       |  +--rw auto-resolve?   boolean
       +--ro statistics
          +--ro in-ns-pkts?          yang:counter64
          +--ro in-na-pkts?          yang:counter64
          +--ro in-rs-pkts?          yang:counter64
          +--ro in-ra-pkts?          yang:counter64
          +--ro in-redirect-pkts?    yang:counter64
          +--ro out-ns-pkts?         yang:counter64
          +--ro out-na-pkts?         yang:counter64
          +--ro out-rs-pkts?         yang:counter64
          +--ro out-ra-pkts?         yang:counter64
          +--ro out-redirect-pkts?   yang:counter64
  augment /if:interfaces/if:interface/ip:ipv6/ip:neighbor:
    +--ro age?   uint32
```

3. IPv6 Neighbor Discovery YANG Module

This section presents the YANG module of IPv6 Neighbor Discovery defined in this document.

This module imports modules from Common YANG Data Types [RFC6991], A YANG Data Model for Interface Management [RFC8343], and A YANG Data Model for IP Management [RFC8344].

<CODE BEGINS> file "ietf-ipv6-nd@2026-04-20.yang"

```
module ietf-ipv6-nd {
  yang-version 1.1;
  namespace "urn:ietf:params:xml:ns:yang:ietf-ipv6-nd";
  prefix v6nd;

  import ietf-yang-types {
    prefix yang;
    reference
      "RFC 6991: Common YANG Data Types";
  }
  import ietf-interfaces {
    prefix if;
    reference
```

```
        "RFC 8343: A Yang Data Model for Interface Management";
    }
    import ietf-ip {
      prefix ip;
      reference
        "RFC 8344: A Yang Data Model for IP Management";
    }

    organization
      "IETF IPv6 Maintenance Working Group (6man)";
    contact
      "WG Web:  <https://datatracker.ietf.org/wg/6man/>
       WG List: <mailto:6man@ietf.org>

       Author:  Fan Zhang
                <zhangf52@chinatelecom.cn>
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                <zhuyq8@chinatelecom.cn>
       Author:  Bo Wu
                <lana.wubo@huawei.com>
       Author:  Jiayuan Hu
                <hujy5@chinatelecom.cn>";
    description
      "This YANG module defines a YANG data model to configure and
       manage IPv6 Neighbor Discovery (ND) and related functions,
       including IPv6 address resolution, redirect, proxy Neighbor
       Advertisement, Neighbor Unreachability Detection (NUD),
       Duplicate Address Detection (DAD), and Enhanced DAD.

       The model is based on YANG 1.1 as defined in RFC 7950 and
       conforms to Network Management Datastore Architecture (NMDA)
       as defined in RFC 8342.

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       authors of the code.  All rights reserved.

       Redistribution and use in source and binary forms, with or
       without modification, is permitted pursuant to, and subject to
       the license terms contained in, the Revised BSD License set
       forth in Section 4.c of the IETF Trust's Legal Provisions
       Relating to IETF Documents
       (https://trustee.ietf.org/license-info).

       This version of this YANG module is part of RFC XXXX
       (https://www.rfc-editor.org/info/rfcXXXX); see the RFC itself
       for full legal notices.";
    reference
      "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
```

```
        RFC4862: IPv6 Stateless Address Autoconfiguration
        RFC7527: Enhanced Duplicate Address Detection";

    revision 2026-04-20 {
      description
        "Initial version.";
      reference
        "RFC XXXX: YANG Data Model for IPv6 Neighbor Discovery";
    }

    /* Data nodes */

    augment "/if:interfaces/if:interface/ip:ipv6" {
      description
        "Augments interface configuration and state data with
         parameters of IPv6 ND.";
      container nd {
        description
          "Parameters of IPv6 ND.";
        leaf reachable-time {
          type uint32 {
            range "1..3600000";
          }
          units "milliseconds";
          default "30000";
          description
            "The time to confirm a neighbor's reachability for NUD.";
          reference
            "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
                      Section 6.3.2 - BaseReachableTime";
        }
        leaf ns-interval {
          type uint32 {
            range "1..max";
          }
          units "milliseconds";
          default "1000";
          description
            "The interval of retransmitting Neighbor Solicitations to a
             neighbor for address resolution, NUD, or DAD.";
          reference
            "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
                      Section 6.3.2";
        }
        leaf redirect {
          type boolean;
          default "false";
          description
```

```
            "Controls whether sending of ICMP Redirect messages
             on the interface is enabled or disabled.
              true -  Sending of ICMP Redirect messages is enabled,
              false - Sending of ICMP Redirect messages is disabled.";
          reference
            "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
                      Section 8";
        }
        leaf proxy-na {
          type boolean;
          default "false";
          description
            "Controls whether proxies for one or more other nodes by
             sending proxy Neighbor Advertisement.
              true -  Proxy NA is enabled,
              false - Proxy NA is disabled.";
          reference
            "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
                      Section 7.2.8";
        }
        container enhanced-dad {
          description
            "Parameters of Enhanced DAD algorithm.";
          leaf enable {
            type boolean;
            default "false";
            description
              "Controls whether Enhanced DAD algorithm is enabled or
               disabled.";
            reference
              "RFC7527: Enhanced Duplicate Address Detection
                        Section 4";
          }
          leaf auto-resolve {
            when "../enable = 'true'";
            type boolean;
            default "false";
            description
              "Controls whether the automated action is taken when
               detecting duplicates. A trusted router can log a system
               management message, drop the received ND message, and
               block the untrusted IPv6 host nodes from which the
               duplicate NS(DAD) or NA message was received.";
            reference
              "RFC7527: Enhanced Duplicate Address Detection
                        Section 5";
          }
          reference
```

```
          "RFC7527: Enhanced Duplicate Address Detection";
        }
        container statistics {
          config false;
          description
            "A collection of interface-related statistics about IPv6
             ND messages.";
          leaf in-ns-pkts {
            type yang:counter64;
            description
              "The number of received Neighbor Solicitation packets.";
          }
          leaf in-na-pkts {
            type yang:counter64;
            description
              "The number of received Neighbor Advertisement packets.";
          }
          leaf in-rs-pkts {
            type yang:counter64;
            description
              "The number of received Router Solicitation packets.";
          }
          leaf in-ra-pkts {
            type yang:counter64;
            description
              "The number of received Router Advertisement packets.";
          }
          leaf in-redirect-pkts {
            type yang:counter64;
            description
              "The number of received Redirect packets.";
          }
          leaf out-ns-pkts {
            type yang:counter64;
            description
              "The number of sent Neighbor Solicitation packets.";
          }
          leaf out-na-pkts {
            type yang:counter64;
            description
              "The number of sent Neighbor Advertisement packets.";
          }
          leaf out-rs-pkts {
            type yang:counter64;
            description
              "The number of sent Router Solicitation packets.";
          }
          leaf out-ra-pkts {
```

```
            type yang:counter64;
            description
              "The number of sent Router Advertisement packets.";
          }
          leaf out-redirect-pkts {
            type yang:counter64;
            description
              "The number of sent Redirect packets.";
          }
        }
      }
    }

    augment "/if:interfaces/if:interface/ip:ipv6/ip:neighbor" {
      description
        "Augments IPv6 neighbor list with parameters of IPv6 address
         resolution based on IPv6 ND.";
      leaf age {
        when "../ip:origin = 'dynamic'";
        type uint32;
        units "seconds";
        config false;
        description
          "The time that has passed since receipt of the last
           reachability confirmation for the neighbor. Ignored when the
           neighbor entry is static.";
        reference
          "RFC4861: Neighbor Discovery for IP version 6 (IPv6)
                    Section 7.3.3";
      }
    }
  }
  <CODE ENDS>
```

4. IANA Considerations

This document registers a URI in the IETF XML registry [RFC3688]. Following the format in [RFC3688], the following registration is requested to be made:

```
    URI: urn:ietf:params:xml:ns:yang:ietf-ipv6-nd
    Registrant Contact: The IESG.
    XML: N/A, the requested URI is an XML namespace.
```

This document registers a YANG module in the YANG Module Names registry [RFC6020].

```
      name: ietf-ipv6-nd
      namespace: urn:ietf:params:xml:ns:yang:ietf-ipv6-nd
      prefix: v6nd
      reference: RFC XXXX
```

5. Security Considerations

This section is modeled after the template described in Section 3.7.1 of [RFC9907].

The "ietf-ipv6-nd" YANG module defines a data model that is designed to be accessed via YANG-based management protocols, such as the Network Configuration Protocol (NETCONF) [RFC6241] and RESTCONF [RFC8040]. These YANG-based management protocols (1) have to use a secure transport layer (e.g., Secure Shell (SSH) [RFC4252], TLS [RFC8446], and QUIC [RFC9000]) and (2) have to use mutual authentication.

The Network Configuration Access Control Model (NACM) [RFC8341] provides the means to restrict access for particular NETCONF or RESTCONF users to a preconfigured subset of all available NETCONF or RESTCONF protocol operations and content.

There are a number of data nodes defined in this YANG module that are writable/creatable/deletable (i.e., "config true", which is the default). All writable data nodes are likely to be sensitive or vulnerable in some network environments. Write operations (e.g., edit-config) and delete operations to these data nodes without proper protection or authentication can have a negative effect on network operations. The following subtrees and data nodes have particular sensitivities/vulnerabilities:

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:reachable-time

This leaf is used to consider a neighbor reachable since the last confirmation of reachability, which could be set to big values to prolong the effect of spoofing Neighbor Cache entries or small values to cause unnecessary frequent NUDs.

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:ns-interval

This leaf is used to set the interval of retransmitting Neighbor Solicitations, which could allow DoS attacks.

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:redirect

This leaf is used to enable the sending of Redirect messages on an interface, which could allow traffic to be misdirected, potentially resulting in traffic hijacking, man-in-the-middle attacks, or DoS attacks.

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:proxy-na

This leaf is used to enable proxy Neighbor Advertisement on an interface, which could allow spoofing traffic to be injected.

Some of the readable data nodes in this YANG module may be considered sensitive or vulnerable in some network environments. It is thus important to control read access (e.g., via get, get-config, or notification) to these data nodes. Specifically, the following subtrees and data nodes have particular sensitivities/ vulnerabilities:

* /if:interfaces/if:interface/ip:ipv6/ip:neighbor/v6nd:age

Unauthorized access to this node may disclose information about IPv6 neighbor reachability and activity patterns on the network.

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:redirect

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:proxy-na

* /if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:enhanced-dad

Unauthorized access to these nodes may disclose device behavior and security-related configuration of IPv6 Neighbor Discovery functions.

6. Acknowledgments

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Appendix A. Data Model Examples

A.1. Configuration of Static IPv6 Neighbor Cache Entry

This example illustrates the manual configuration for a Neighbor Cache entry of interface eth0 for peer 2001:db8::2 with link-layer address 00:00:5E:00:53:AB statically, using the ietf-interfaces module [RFC8343] and the ietf-ip module [RFC8344].

```
<?xml version='1.0' encoding='UTF-8'?>
<interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
  xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">
  <interface>
    <name>eth0</name>
    <type>ianaift:ethernetCsmacd</type>
    <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
      <neighbor>
        <ip>2001:db8::2</ip>
        <link-layer-address>00:00:5E:00:53:AB</link-layer-address>
      </neighbor>
    </ipv6>
  </interface>
</interfaces>
```

The following is the same example using JSON format.

```
{
  "ietf-interfaces:interfaces": {
    "interface": [
      {
        "name": "eth0",
        "type": "iana-if-type:ethernetCsmacd",
        "ietf-ip:ipv6": {
          "neighbor": [
            {
              "ip": "2001:db8::2",
              "link-layer-address": "00:00:5E:00:53:AB"
            }
          ]
        }
      }
    ]
  }
}
```

A.2. Configuration of Proxy Neighbor Advertisement, Redirect, NUD, and DAD

This example illustrates the configuration of enabling proxy Neighbor Advertisement, Redirect, NUD, DAD, and enhanced DAD with setting the "dup-addr-detect-transmits" leaf as 1, the "reachable-time" leaf as 30000 milliseconds, and the "ns-interval" leaf as 1000 milliseconds, using the ietf-interfaces module [RFC8343], the ietf-ip module [RFC8344], and the IPv6 ND module.

```
<interfaces xmlns="urn:ietf:params:xml:ns:yang:ietf-interfaces"
  xmlns:ianaift="urn:ietf:params:xml:ns:yang:iana-if-type">
  <interface>
    <name>eth0</name>
    <type>ianaift:ethernetCsmacd</type>
    <ipv6 xmlns="urn:ietf:params:xml:ns:yang:ietf-ip">
      <dup-addr-detect-transmits>1</dup-addr-detect-transmits>
      <nd xmlns="urn:ietf:params:xml:ns:yang:ietf-ipv6-nd">
        <reachable-time>30000</reachable-time>
        <ns-interval>1000</ns-interval>
        <redirect>true</redirect>
        <proxy-na>true</proxy-na>
        <enhanced-dad>
          <enable>true</enable>
          <auto-resolve>true</auto-resolve>
        </enhanced-dad>
      </nd>
    </ipv6>
  </interface>
</interfaces>
```

The following is the same example using JSON format.

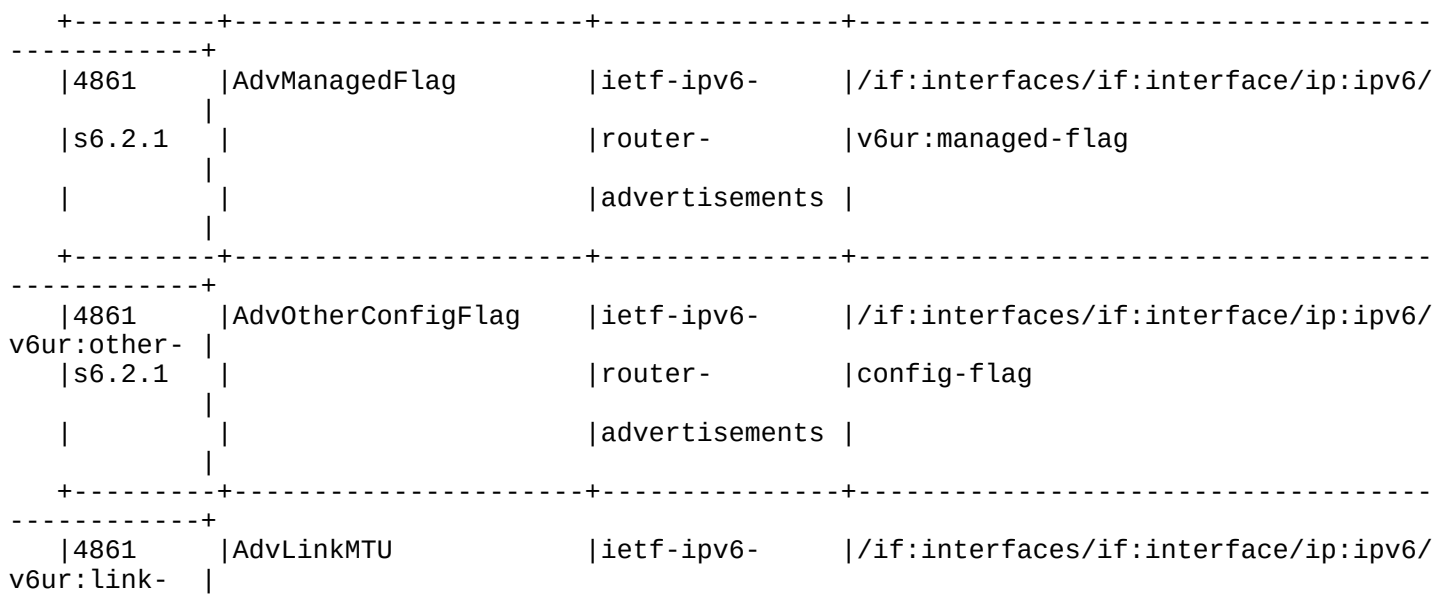
```
{
  "ietf-interfaces:interfaces": {
    "interface": [
      {
        "name": "eth0",
        "type": "iana-if-type:ethernetCsmacd",
        "ietf-ip:ipv6": {
          "dup-addr-detect-transmits": 1,
          "ietf-ipv6-nd:nd": {
            "reachable-time": 30000,
            "ns-interval": 1000,
            "redirect": true,
            "proxy-na": true,
            "enhanced-dad": {
              "enable": true,
              "auto-resolve": true
            }
          }
        }
      }
    ]
  }
}
```

Appendix B. Coverage of IPv6 ND Functions in YANG Modules

This appendix analyzes the functional elements related to the IPv6 ND protocol and identifies whether they are covered by existing IETF YANG modules or defined in this document.

The table below maps the relevant RFCs, functions or parameters, the corresponding YANG modules, and their specific data paths. The functions are defined in [RFC4861] (Neighbor Discovery for IP version 6 (IPv6)), [RFC4862] (IPv6 Stateless Address Autoconfiguration), and [RFC7527] (Enhanced Duplicate Address Detection). The parameters are defined in Section 6.2.1 and 6.3.2 of [RFC4861], Section 5.1 of [RFC4862], and Section 3.3 of [RFC4941].

RFC (Section)	Function/Parameter	Covered by	Path
4861 s5.1	Neighbor Cache	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:neighbor
4862 s5.1	Prefix List (AdvPrefixList)	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:prefix-list
4861 s6.2.1	IsRouter	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:forwarding
4861 s6.2.1	AdvSendAdvertisements	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:ipv6-router-advertisements
4861 s6.2.1	MaxRtrAdvInterval	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:max-rtr-adv-interval
4861 s6.2.1	MinRtrAdvInterval	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:min-rtr-adv-interval



```
   +---------+----------------------+--------------+-----------------------------------
------------+
   |4861     |AdvManagedFlag        |ietf-ipv6-    |/if:interfaces/if:interface/ip:ipv6/
           |
   |s6.2.1   |                      |router-       |v6ur:managed-flag
           |
   |         |                      |advertisements |
           |
   +---------+----------------------+--------------+-----------------------------------
------------+
   |4861     |AdvOtherConfigFlag    |ietf-ipv6-    |/if:interfaces/if:interface/ip:ipv6/
v6ur:other- |
   |s6.2.1   |                      |router-       |config-flag
           |
   |         |                      |advertisements |
           |
   +---------+----------------------+--------------+-----------------------------------
------------+
   |4861     |AdvLinkMTU            |ietf-ipv6-    |/if:interfaces/if:interface/ip:ipv6/
v6ur:link-  |
```

4861 s6.2.1		router-advertisements	mtu
4861 s6.2.1	AdvReachableTime (for RA)	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:reachable-time
4861 s6.2.1	AdvRetransTimer	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:retrans-timer
4861 s6.2.1	AdvCurHopLimit	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:cur-hop-limit
4861 s6.2.1	AdvDefaultLifetime	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:default-lifetime
4861 s6.2.1	AdvPrefixList/AdvValidLifetime	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:prefix-list/v6ur:prefix/v6ur:control-adv-prefixes/v6ur:advertise/v6ur:valid-lifetime
4861 s6.2.1	AdvPrefixList/AdvOnLinkFlag	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:prefix-list/v6ur:prefix/v6ur:control-adv-prefixes/v6ur:advertise/v6ur:on-link-flag
4861 s6.2.1	AdvPrefixList/AdvPreferredLifetime	ietf-ipv6-router-advertisements	/if:interfaces/if:interface/ip:ipv6/v6ur:prefix-list/v6ur:prefix/v6ur:control-adv-prefixes/v6ur:advertise/v6ur:preferred-lifetime

```
   |4861     |AdvPrefixList/        |ietf-ipv6-     |/if:interfaces/if:interface/ip:ipv6/
v6ur:prefix-|
   |s6.2.1   |AdvAutonomousFlag     |router-        |list/v6ur:prefix/v6ur:control-adv-
            |
   |         |                      |advertisements |prefixes/v6ur:advertise/v6ur:autonom
ous-flag    |
   +---------+----------------------+---------------+-----------------------------------
------------+
   |4861     |BaseReachableTime     |ietf-ipv6-nd   |/if:interfaces/if:interface/ip:ipv6/
v6nd:nd/    |
   |s6.3.2   |                      |               |v6nd:reachable-time
            |
   +---------+----------------------+---------------+-----------------------------------
------------+
   |4861     |RetransTimer(for NS)  |ietf-ipv6-nd   |/if:interfaces/if:interface/ip:ipv6/
v6nd:nd/    |
   |s6.3.2   |                      |               |v6nd:ns-interval
            |
   |/4862    |                      |               |
            |
   |s5.1     |                      |               |
            |
   +---------+----------------------+---------------+-----------------------------------
------------+
   |4861     |CurHopLimit(for Node) |(reuse         |
            |
   |s6.3.2   |                      |AdvCurHopLimit)|
            |
   +---------+----------------------+---------------+-----------------------------------
------------+
   |4861     |Proxy Neighbor        |ietf-ipv6-nd   |/if:interfaces/if:interface/ip:ipv6/
v6nd:nd/    |
   |s7.2.8   |Advertisements        |               |v6nd:proxy-na
            |
```

4861 s8	Redirect	ietf-ipv6-nd	/if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:redirect
4862 s5.1	DupAddrDetectTransmits	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:dup-addr-detect-transmits
4862 s5.5	Creation of Global Addresses	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:autoconf/ip:create-global-addresses
4941	Creation of Temporary Addresses	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:autoconf/ip:create-temporary-addresses
4941	TEMP_VALID_LIFETIME	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:autoconf/ip:temporary-valid-lifetime
4941	TEMP_PREFERRED_LIFETIME	ietf-ip	/if:interfaces/if:interface/ip:ipv6/ip:autoconf/ip:temporary-preferred-lifetime
7527 s4	Enhanced Duplicate Address Detection	ietf-ipv6-nd	/if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:enhanced-dad
7527 s5	Automated Resolving of Duplicates	ietf-ipv6-nd	/if:interfaces/if:interface/ip:ipv6/v6nd:nd/v6nd:auto-resolve

Table 1: Coverage of IPv6 ND Functions in YANG Modules

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