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B. Fenner  
Arista Networks, Inc.  
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## The IPv6-Specific MIB Modules Are Obsolete

### Abstract

In 2005-2006, the IPv6 MIB update group published updated versions of the IP-MIB, UDP-MIB, TCP-MIB, and IP-FORWARD-MIB modules, which use the InetAddressType/InetAddress construct to handle IPv4 and IPv6 in the same table. This document contains versions of the obsoleted IPV6-MIB, IPV6-TC, IPV6-ICMP-MIB, IPV6-TCP-MIB, and IPV6-UDP-MIB modules for the purpose of updating MIB module repositories. This document obsoletes RFCs 2452, 2454, 2465, and 2466 (i.e., the RFCs containing these MIBs) and reclassifies them as Historic.

### Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

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Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at <http://www.rfc-editor.org/info/rfc8096>.

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## 1. Motivation

In 2005-2006, the IPv6 MIB update group published updated versions of the IP-MIB [RFC4293], UDP-MIB [RFC4113], TCP-MIB [RFC4022], and IP-FORWARD-MIB [RFC4292] modules, which use the InetAddressType/InetAddress construct to handle IPv4 and IPv6 in the same table. The RFC Editor marked these documents as obsoleting the corresponding IPV6-MIBs, but the extracted content of these MIBs never changed in MIB repositories, and the original RFCs (as is normal IETF policy) never changed from being Proposed Standard.

Note that the timeline of these MIB modules is as shown below (and it is the added support for IPv6 in the later revision of the original modules that people often overlook).

```
          IPv6-MIB-----X
                   \
IP-MIB-----IP-MIB--->
```

This causes an unclear situation when simply looking at MIB repositories, so we are simply republishing these MIB modules with the Structure of Management Information (SMI) status changed to obsolete. This is an unusual step, and it is not the intended path with every obsolete MIB module; the special history of these modules led to this special step.

## 2. Historic IPV6-TC

```
IPV6-TC DEFINITIONS ::= BEGIN
```

```
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```

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```

```
IMPORTS
```

```
    Integer32                FROM SNMPv2-SMI
    TEXTUAL-CONVENTION       FROM SNMPv2-TC;
```

```
-- definition of textual conventions
```

```
Ipv6Address ::= TEXTUAL-CONVENTION
```

```
    DISPLAY-HINT "2x:"
    STATUS        obsolete
    DESCRIPTION
```

```
    "This data type is used to model IPv6 addresses.
     This is a binary string of 16 octets in network
     byte-order.
```

```
    This object is obsoleted by INET-ADDRESS-MIB::InetAddress."
    SYNTAX          OCTET STRING (SIZE (16))
```

```
Ipv6AddressPrefix ::= TEXTUAL-CONVENTION
```

```
    DISPLAY-HINT "2x:"
    STATUS        obsolete
    DESCRIPTION
```

```
    "This data type is used to model IPv6 address
     prefixes. This is a binary string of up to 16
     octets in network byte-order.
```

```
    This object is obsoleted by INET-ADDRESS-MIB::InetAddress."
    SYNTAX          OCTET STRING (SIZE (0..16))
```

```
Ipv6AddressIfIdentifier ::= TEXTUAL-CONVENTION
```

```
    DISPLAY-HINT "2x:"
    STATUS        obsolete
    DESCRIPTION
```

```
    "This data type is used to model IPv6 address
     interface identifiers. This is a binary string
     of up to 8 octets in network byte-order.
```

```
    This object is obsoleted by IP-MIB::Ipv6AddressIfIdentifierTC."
```

SYNTAX OCTET STRING (SIZE (0..8))

Ipv6IfIndex ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS obsolete

DESCRIPTION

"A unique value, greater than zero for each internetwork-layer interface in the managed system. It is recommended that values are assigned contiguously starting from 1. The value for each internetwork-layer interface must remain constant at least from one re-initialization of the entity's network management system to the next re-initialization.

This object is obsoleted by IF-MIB::InterfaceIndex."  
SYNTAX Integer32 (1..2147483647)

Ipv6IfIndexOrZero ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS obsolete

DESCRIPTION

"This textual convention is an extension of the Ipv6IfIndex convention. The latter defines a greater than zero value used to identify an IPv6 interface in the managed system. This extension permits the additional value of zero. The value zero is object-specific and must therefore be defined as part of the description of any object which uses this syntax. Examples of the usage of zero might include situations where interface was unknown, or when none or all interfaces need to be referenced.

This object is obsoleted by IF-MIB::InterfaceIndexOrZero."  
SYNTAX Integer32 (0..2147483647)

END

## 3. Historic IPV6-MIB

```
IPV6-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
    MODULE-IDENTITY, OBJECT-TYPE, NOTIFICATION-TYPE,
    mib-2, Counter32, Unsigned32, Integer32,
    Gauge32                                FROM SNMPv2-SMI
    DisplayString, PhysAddress, TruthValue, TimeStamp,
    VariablePointer, RowPointer            FROM SNMPv2-TC
    MODULE-COMPLIANCE, OBJECT-GROUP,
    NOTIFICATION-GROUP                    FROM SNMPv2-CONF
    Ipv6IfIndex, Ipv6Address, Ipv6AddressPrefix,
    Ipv6AddressIfIdentifier,
    Ipv6IfIndexOrZero                    FROM IPV6-TC;
```

```
ipv6MIB MODULE-IDENTITY
```

```
    LAST-UPDATED "201702220000Z"
    ORGANIZATION "IETF IPv6 Working Group"
    CONTACT-INFO
        "
            Dimitry Haskin

            Postal: Bay Networks, Inc.
                    660 Technology Park Drive.
                    Billerica, MA 01821

                    US

            Tel: +1-978-916-8124
            E-mail: dhaskin@baynetworks.com

            Steve Onishi

            Postal: Bay Networks, Inc.
                    3 Federal Street
                    Billerica, MA 01821
                    US

            Tel: +1-978-916-3816
            E-mail: sonishi@baynetworks.com"
```

```
DESCRIPTION
```

```
"The obsolete MIB module for entities implementing the IPv6
protocol. Use the IP-MIB or IP-FORWARD-MIB instead.
```

```
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REVISION "201702220000Z"

DESCRIPTION

"Obsoleting this MIB module; it has been replaced by the revised IP-MIB (RFC 4293) and IP-FORWARD-MIB (RFC 4292)."

REVISION "9802052155Z"

DESCRIPTION

"First revision, published as RFC 2465"  
::= { mib-2 55 }

-- the IPv6 general group

ipv6MIBObjects OBJECT IDENTIFIER ::= { ipv6MIB 1 }

ipv6Forwarding OBJECT-TYPE

SYNTAX INTEGER {  
    forwarding(1), -- acting as a router  
                    -- NOT acting as  
    notForwarding(2) -- a router  
}

MAX-ACCESS read-write

STATUS obsolete

DESCRIPTION

"The indication of whether this entity is acting as an IPv6 router in respect to the forwarding of datagrams received by, but not addressed to, this entity. IPv6 routers forward datagrams. IPv6 hosts do not (except those source-routed via the host).

Note that for some managed nodes, this object may take on only a subset of the values possible. Accordingly, it is appropriate for an agent to return a 'wrongValue' response if a management station attempts to change this object to an inappropriate value.

This object is obsoleted by IP-MIB::ipv6IpForwarding."  
::= { ipv6MIBObjects 1 }

## ipv6DefaultHopLimit OBJECT-TYPE

SYNTAX INTEGER(0..255)

MAX-ACCESS read-write

STATUS obsolete

## DESCRIPTION

"The default value inserted into the Hop Limit field of the IPv6 header of datagrams originated at this entity, whenever a Hop Limit value is not supplied by the transport layer protocol.

This object is obsoleted by IP-MIB::ipv6IpDefaultHopLimit."

DEFVAL { 64 }

::= { ipv6MIBObjects 2 }

## ipv6Interfaces OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of IPv6 interfaces (regardless of their current state) present on this system.

This object is obsolete; there is no direct replacement, but its value can be derived from the number of rows in the IP-MIB::ipv6InterfaceTable."

::= { ipv6MIBObjects 3 }

## ipv6IfTableLastChange OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The value of sysUpTime at the time of the last insertion or removal of an entry in the ipv6IfTable. If the number of entries has been unchanged since the last re-initialization of the local network management subsystem, then this object contains a zero value.

This object is obsoleted by IP-MIB::ipv6InterfaceTableLastChange."

::= { ipv6MIBObjects 4 }

-- the IPv6 Interfaces table

## ipv6IfTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ipv6IfEntry

MAX-ACCESS not-accessible



STATUS        obsolete

DESCRIPTION

"The IPv6 Interfaces table contains information on the entity's internetwork-layer interfaces. An IPv6 interface constitutes a logical network layer attachment to the layer immediately below

IPv6 including internet layer 'tunnels', such as tunnels over IPv4 or IPv6 itself.

This table is obsoleted by IP-MIB::ipv6InterfaceTable."  
::= { ipv6MIBObjects 5 }

ipv6IfEntry OBJECT-TYPE

SYNTAX        Ipv6IfEntry

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"An interface entry containing objects about a particular IPv6 interface.

This object is obsoleted by IP-MIB::ipv6InterfaceEntry."  
INDEX        { ipv6IfIndex }  
::= { ipv6IfTable 1 }

Ipv6IfEntry ::= SEQUENCE {

ipv6IfIndex	Ipv6IfIndex,
ipv6IfDescr	DisplayString,
ipv6IfLowerLayer	VariablePointer,
ipv6IfEffectiveMtu	Unsigned32,
ipv6IfReasmMaxSize	Unsigned32,
ipv6IfIdentifier	Ipv6AddressIfIdentifier,
ipv6IfIdentifierLength	INTEGER,
ipv6IfPhysicalAddress	PhysAddress,
ipv6IfAdminStatus	INTEGER,
ipv6IfOperStatus	INTEGER,
ipv6IfLastChange	TimeStamp

}

ipv6IfIndex OBJECT-TYPE

SYNTAX        Ipv6IfIndex

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"A unique non-zero value identifying the particular IPv6 interface.

This object is obsoleted. In the IP-MIB,

interfaces are simply identified by IfIndex."  
 ::= { ipv6IfEntry 1 }

ipv6IfDescr OBJECT-TYPE

SYNTAX DisplayString

MAX-ACCESS read-write

STATUS obsolete

DESCRIPTION

"A textual string containing information about the interface. This string may be set by the network management system.

This object is obsoleted by IF-MIB::ifDescr."  
 ::= { ipv6IfEntry 2 }

ipv6IfLowerLayer OBJECT-TYPE

SYNTAX VariablePointer

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"This object identifies the protocol layer over which this network interface operates. If this network interface operates over the data-link layer, then the value of this object refers to an instance of ifIndex [RFC1573]. If this network interface operates over an IPv4 interface, the value of this object refers to an instance of ipAdEntAddr [RFC1213].

If this network interface operates over another IPv6 interface, the value of this object refers to an instance of ipv6IfIndex. If this network interface is not currently operating over an active protocol layer, then the value of this object should be set to the OBJECT ID { 0 0 }.

This object is obsolete. The IF-STACK-TABLE may be used to express relationships between interfaces."  
 ::= { ipv6IfEntry 3 }

ipv6IfEffectiveMtu OBJECT-TYPE

SYNTAX Unsigned32

UNITS "octets"

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The size of the largest IPv6 packet which can be sent/received on the interface, specified in octets.

This object is obsolete. The value of IF-MIB::ifMtu for the corresponding value of ifIndex represents the MTU of the interface."

::= { ipv6IfEntry 4 }

ipv6IfReasmMaxSize OBJECT-TYPE

SYNTAX Unsigned32 (0..65535)

UNITS "octets"

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The size of the largest IPv6 datagram which this entity can re-assemble from incoming IPv6 fragmented datagrams received on this interface.

This object is obsoleted by IP-MIB::ipv6InterfaceReasmMaxSize."

::= { ipv6IfEntry 5 }

ipv6IfIdentifier OBJECT-TYPE

SYNTAX Ipv6AddressIfIdentifier

MAX-ACCESS read-write

STATUS obsolete

DESCRIPTION

"The Interface Identifier for this interface that is (at least) unique on the link this interface is attached to. The Interface Identifier is combined with an address prefix to form an interface address.

By default, the Interface Identifier is autoconfigured according to the rules of the link type this interface is attached to.

This object is obsoleted by IP-MIB::ipv6InterfaceIdentifier."

::= { ipv6IfEntry 6 }

ipv6IfIdentifierLength OBJECT-TYPE

SYNTAX INTEGER (0..64)

UNITS "bits"

MAX-ACCESS read-write

STATUS obsolete

DESCRIPTION

"The length of the Interface Identifier in bits.

This object is obsolete. It can be derived from the length of IP-MIB::ipv6InterfaceIdentifier; Interface Identifiers that are not an even number of octets are not supported."

::= { ipv6IfEntry 7 }

## ipv6IfPhysicalAddress OBJECT-TYPE

SYNTAX PhysAddress

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The interface's physical address. For example, for an IPv6 interface attached to an 802.x link, this object normally contains a MAC address. Note that in some cases this address may differ from the address of the interface's protocol sub-layer. The interface's media-specific MIB must define the bit and byte ordering and the format of the value of this object. For interfaces which do not have such an address (e.g., a serial line), this object should contain an octet string of zero length.

This object is obsoleted by IF-MIB::ifPhysAddress."  
::= { ipv6IfEntry 8 }

## ipv6IfAdminStatus OBJECT-TYPE

SYNTAX INTEGER {  
    up(1),               -- ready to pass packets  
    down(2)  
}

MAX-ACCESS read-write

STATUS obsolete

## DESCRIPTION

"The desired state of the interface. When a managed system initializes, all IPv6 interfaces start with ipv6IfAdminStatus in the down(2) state. As a result of either explicit management action or per configuration information retained by the managed system, ipv6IfAdminStatus is then changed to the up(1) state (or remains in the down(2) state).

This object is obsolete. IPv6 does not have a separate admin status; the admin status of the interface is represented by IF-MIB::ifAdminStatus."  
::= { ipv6IfEntry 9 }

## ipv6IfOperStatus OBJECT-TYPE

SYNTAX INTEGER {  
    up(1),               -- ready to pass packets  
  
    down(2),  
    noIfIdentifier(3), -- no interface identifier  
  
    -- status can not be

```

        unknown(4),      -- determined for some
                        -- reason
        notPresent(5)    -- some component is
                        -- missing
    }
MAX-ACCESS    read-only
STATUS        obsolete
DESCRIPTION
    "The current operational state of the interface.
    The noIfIdentifier(3) state indicates that no valid
    Interface Identifier is assigned to the interface.
    This state usually indicates that the link-local
    interface address failed Duplicate Address Detection.
    If ipv6IfAdminStatus is down(2) then ipv6IfOperStatus
    should be down(2). If ipv6IfAdminStatus is changed
    to up(1) then ipv6IfOperStatus should change to up(1)
    if the interface is ready to transmit and receive
    network traffic; it should remain in the down(2) or
    noIfIdentifier(3) state if and only if there is a
    fault that prevents it from going to the up(1) state;
    it should remain in the notPresent(5) state if
    the interface has missing (typically, lower layer)
    components.

    This object is obsolete. IPv6 does not have a
    separate operational status; the operational status of the
    interface is represented by IF-MIB::ifOperStatus."
 ::= { ipv6IfEntry 10 }

```

#### ipv6IfLastChange OBJECT-TYPE

```

SYNTAX        TimeStamp
MAX-ACCESS    read-only
STATUS        obsolete
DESCRIPTION
    "The value of sysUpTime at the time the interface
    entered its current operational state. If the
    current state was entered prior to the last
    re-initialization of the local network management
    subsystem, then this object contains a zero
    value.

    This object is obsolete. The last change of
    IF-MIB::ifOperStatus is represented by IF-MIB::ifLastChange."
 ::= { ipv6IfEntry 11 }

```

-- IPv6 Interface Statistics table

```
ipv6IfStatsTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ipv6IfStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "IPv6 interface traffic statistics.

        This table is obsoleted by the IP-MIB::ipIfStatsTable."
    ::= { ipv6MIBObjects 6 }

ipv6IfStatsEntry OBJECT-TYPE
    SYNTAX      Ipv6IfStatsEntry
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "An interface statistics entry containing objects
        at a particular IPv6 interface.

        This object is obsoleted by the IP-MIB::ipIfStatsEntry."
    AUGMENTS { ipv6IfEntry }
    ::= { ipv6IfStatsTable 1 }

Ipv6IfStatsEntry ::= SEQUENCE {
    ipv6IfStatsInReceives
        Counter32,
    ipv6IfStatsInHdrErrors
        Counter32,
    ipv6IfStatsInTooBigErrors
        Counter32,
    ipv6IfStatsInNoRoutes
        Counter32,
    ipv6IfStatsInAddrErrors
        Counter32,
    ipv6IfStatsInUnknownProtos
        Counter32,
    ipv6IfStatsInTruncatedPkts
        Counter32,
    ipv6IfStatsInDiscards
        Counter32,
    ipv6IfStatsInDelivers
        Counter32,
    ipv6IfStatsOutForwDatagrams
        Counter32,
    ipv6IfStatsOutRequests
        Counter32,
    ipv6IfStatsOutDiscards
        Counter32,
    ipv6IfStatsOutFragOKs
```

```
        Counter32,
    ipv6IfStatsOutFragFails
        Counter32,
    ipv6IfStatsOutFragCreates
        Counter32,
    ipv6IfStatsReasmReqds
        Counter32,
    ipv6IfStatsReasmOKs
        Counter32,
    ipv6IfStatsReasmFails
        Counter32,
    ipv6IfStatsInMcastPkts
        Counter32,
    ipv6IfStatsOutMcastPkts
        Counter32
}
```

ipv6IfStatsInReceives OBJECT-TYPE

```
SYNTAX      Counter32
MAX-ACCESS  read-only
STATUS      obsolete
```

DESCRIPTION

"The total number of input datagrams received by the interface, including those received in error."

This object is obsoleted by IP-MIB::ipIfStatsHCInReceives."  
::= { ipv6IfStatsEntry 1 }

ipv6IfStatsInHdrErrors OBJECT-TYPE

```
SYNTAX      Counter32
MAX-ACCESS  read-only
STATUS      obsolete
```

DESCRIPTION

"The number of input datagrams discarded due to errors in their IPv6 headers, including version number mismatch, other format errors, hop count exceeded, errors discovered in processing their IPv6 options, etc."

This object is obsoleted by IP-MIB::ipIfStatsInHdrErrors."  
::= { ipv6IfStatsEntry 2 }

ipv6IfStatsInTooBigErrors OBJECT-TYPE

```
SYNTAX      Counter32
MAX-ACCESS  read-only
STATUS      obsolete
```

DESCRIPTION

"The number of input datagrams that could not be

forwarded because their size exceeded the link MTU of outgoing interface.

This object is obsoleted. It was not replicated in the IP-MIB due to feedback that systems did not retain the incoming interface of a packet that failed fragmentation."  
::= { ipv6IfStatsEntry 3 }

ipv6IfStatsInNoRoutes OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of input datagrams discarded because no route could be found to transmit them to their destination.

This object is obsoleted by IP-MIB::ipIfStatsInNoRoutes."  
::= { ipv6IfStatsEntry 4 }

ipv6IfStatsInAddrErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of input datagrams discarded because the IPv6 address in their IPv6 header's destination field was not a valid address to be received at this entity. This count includes invalid addresses (e.g., ::0) and unsupported addresses (e.g., addresses with unallocated prefixes). For entities which are not IPv6 routers and therefore do not forward datagrams, this counter includes datagrams discarded because the destination address was not a local address.

This object is obsoleted by IP-MIB::ipIfStatsInAddrErrors."  
::= { ipv6IfStatsEntry 5 }

ipv6IfStatsInUnknownProtos OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of locally-addressed datagrams received successfully but discarded because of an unknown or unsupported protocol. This counter is incremented at the interface to which these



datagrams were addressed which might not be necessarily the input interface for some of the datagrams.

This object is obsoleted by IP-MIB::ipIfStatsInUnknownProtos."  
::= { ipv6IfStatsEntry 6 }

ipv6IfStatsInTruncatedPkts OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of input datagrams discarded because datagram frame didn't carry enough data.

This object is obsoleted by IP-MIB::ipIfStatsInTruncatedPkts."  
::= { ipv6IfStatsEntry 7 }

ipv6IfStatsInDiscards OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of input IPv6 datagrams for which no problems were encountered to prevent their continued processing, but which were discarded (e.g., for lack of buffer space). Note that this counter does not include any datagrams discarded while awaiting re-assembly.

This object is obsoleted by IP-MIB::ipIfStatsInDiscards."  
::= { ipv6IfStatsEntry 8 }

ipv6IfStatsInDelivers OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The total number of datagrams successfully delivered to IPv6 user-protocols (including ICMP). This counter is incremented at the interface to which these datagrams were addressed which might not be necessarily the input interface for some of the datagrams.

This object is obsoleted by IP-MIB::ipIfStatsHCInDelivers."  
::= { ipv6IfStatsEntry 9 }

**ipv6IfStatsOutForwDatagrams OBJECT-TYPE**

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of output datagrams which this entity received and forwarded to their final destinations. In entities which do not act as IPv6 routers, this counter will include only those packets which were Source-Routed via this entity, and the Source-Route processing was successful. Note that for a successfully forwarded datagram the counter of the outgoing interface is incremented.

This object is obsoleted by

IP-MIB::ipIfStatsHCOutForwDatagrams."

::= { ipv6IfStatsEntry 10 }

**ipv6IfStatsOutRequests OBJECT-TYPE**

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The total number of IPv6 datagrams which local IPv6 user-protocols (including ICMP) supplied to IPv6 in requests for transmission. Note that this counter does not include any datagrams counted in ipv6IfStatsOutForwDatagrams.

This object is obsoleted by IP-MIB::ipIfStatsHCOutRequests."

::= { ipv6IfStatsEntry 11 }

**ipv6IfStatsOutDiscards OBJECT-TYPE**

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of output IPv6 datagrams for which no problem was encountered to prevent their transmission to their destination, but which were discarded (e.g., for lack of buffer space). Note that this counter would include datagrams counted in ipv6IfStatsOutForwDatagrams if any such packets met this (discretionary) discard criterion.

This object is obsoleted by IP-MIB::ipIfStatsOutDiscards."

::= { ipv6IfStatsEntry 12 }

## ipv6IfStatsOutFragOKs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of IPv6 datagrams that have been successfully fragmented at this output interface.

This object is obsoleted by IP-MIB::ipIfStatsOutFragOKs."

::= { ipv6IfStatsEntry 13 }

## ipv6IfStatsOutFragFails OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of IPv6 datagrams that have been discarded because they needed to be fragmented at this output interface but could not be.

This object is obsoleted by IP-MIB::ipIfStatsOutFragFails."

::= { ipv6IfStatsEntry 14 }

## ipv6IfStatsOutFragCreates OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of output datagram fragments that have been generated as a result of fragmentation at this output interface.

This object is obsoleted by IP-MIB::ipIfStatsOutFragCreates."

::= { ipv6IfStatsEntry 15 }

## ipv6IfStatsReasmReqds OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of IPv6 fragments received which needed to be reassembled at this interface. Note that this counter is incremented at the interface to which these fragments were addressed which might not be necessarily the input interface for some of the fragments.

This object is obsoleted by IP-MIB::ipIfStatsReasmReqds."

```
::= { ipv6IfStatsEntry 16 }
```

ipv6IfStatsReasmOKs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of IPv6 datagrams successfully reassembled. Note that this counter is incremented at the interface to which these datagrams were addressed which might not be necessarily the input interface for some of the fragments.

This object is obsoleted by IP-MIB::ipIfStatsReasmOKs."

```
::= { ipv6IfStatsEntry 17 }
```

ipv6IfStatsReasmFails OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of failures detected by the IPv6 re-assembly algorithm (for whatever reason: timed out, errors, etc.). Note that this is not necessarily a count of discarded IPv6 fragments since some algorithms (notably the algorithm in RFC 815) can lose track of the number of fragments by combining them as they are received.

This counter is incremented at the interface to which these fragments were addressed which might not be necessarily the input interface for some of the fragments.

This object is obsoleted by IP-MIB::ipIfStatsReasmFails."

```
::= { ipv6IfStatsEntry 18 }
```

ipv6IfStatsInMcastPkts OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of multicast packets received by the interface

This object is obsoleted by IP-MIB::ipIfStatsHCInMcastPkts."

```
::= { ipv6IfStatsEntry 19 }
```

ipv6IfStatsOutMcastPkts OBJECT-TYPE

```

SYNTAX      Counter32
MAX-ACCESS  read-only
STATUS      obsolete
DESCRIPTION
    "The number of multicast packets transmitted
    by the interface

    This object is obsoleted by IP-MIB::ipIfStatsHCOutMcastPkts."
 ::= { ipv6IfStatsEntry 20 }

```

```
-- Address Prefix table
```

```
-- The IPv6 Address Prefix table contains information on
-- the entity's IPv6 Address Prefixes that are associated
-- with IPv6 interfaces.
```

```

ipv6AddrPrefixTable OBJECT-TYPE
    SYNTAX  SEQUENCE OF Ipv6AddrPrefixEntry
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "The list of IPv6 address prefixes of
        IPv6 interfaces.

        This table is obsoleted by IP-MIB::ipAddressPrefixTable."
 ::= { ipv6MIBObjects 7 }

```

```

ipv6AddrPrefixEntry OBJECT-TYPE
    SYNTAX  Ipv6AddrPrefixEntry
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "An interface entry containing objects of
        a particular IPv6 address prefix.

        This entry is obsoleted by IP-MIB::ipAddressPrefixEntry."
    INDEX   { ipv6IfIndex,
              ipv6AddrPrefix,
              ipv6AddrPrefixLength }
 ::= { ipv6AddrPrefixTable 1 }

```

```

Ipv6AddrPrefixEntry ::= SEQUENCE {
    ipv6AddrPrefix          Ipv6AddressPrefix,
    ipv6AddrPrefixLength    INTEGER,
    ipv6AddrPrefixOnLinkFlag TruthValue,
    ipv6AddrPrefixAutonomousFlag TruthValue,
    ipv6AddrPrefixAdvPreferredLifetime Unsigned32,
    ipv6AddrPrefixAdvValidLifetime Unsigned32
}

```

}

ipv6AddrPrefix OBJECT-TYPE

SYNTAX Ipv6AddressPrefix

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"The prefix associated with the this interface.

This object is obsoleted by IP-MIB::ipAddressPrefixPrefix."

::= { ipv6AddrPrefixEntry 1 }

ipv6AddrPrefixLength OBJECT-TYPE

SYNTAX INTEGER (0..128)

UNITS "bits"

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"The length of the prefix (in bits).

This object is obsoleted by IP-MIB::ipAddressPrefixLength."

::= { ipv6AddrPrefixEntry 2 }

ipv6AddrPrefixOnLinkFlag OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"This object has the value 'true(1)', if this prefix can be used for on-link determination and the value 'false(2)' otherwise.

This object is obsoleted by IP-MIB::ipAddressPrefixOnLinkFlag."

::= { ipv6AddrPrefixEntry 3 }

ipv6AddrPrefixAutonomousFlag OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"Autonomous address configuration flag. When true(1), indicates that this prefix can be used for autonomous address configuration (i.e. can be used to form a local interface address). If false(2), it is not used to autoconfigure a local interface address.

This object is obsoleted by

```
IP-MIB::ipAddressPrefixAutonomousFlag."  
::= { ipv6AddrPrefixEntry 4 }
```

ipv6AddrPrefixAdvPreferredLifetime OBJECT-TYPE

```
SYNTAX      Unsigned32  
UNITS       "seconds"  
MAX-ACCESS  read-only  
STATUS      obsolete  
DESCRIPTION  
    "It is the length of time in seconds that this  
    prefix will remain preferred, i.e. time until  
    deprecation. A value of 4,294,967,295 represents  
    infinity.
```

The address generated from a deprecated prefix should no longer be used as a source address in new communications, but packets received on such an interface are processed as expected.

```
This object is obsoleted by  
IP-MIB::ipAddressPrefixAdvPreferredLifetime."  
::= { ipv6AddrPrefixEntry 5 }
```

ipv6AddrPrefixAdvValidLifetime OBJECT-TYPE

```
SYNTAX      Unsigned32  
UNITS       "seconds"  
MAX-ACCESS  read-only  
STATUS      obsolete  
DESCRIPTION  
    "It is the length of time in seconds that this  
    prefix will remain valid, i.e. time until  
    invalidation. A value of 4,294,967,295 represents  
    infinity.
```

The address generated from an invalidated prefix should not appear as the destination or source address of a packet.

```
This object is obsoleted by  
IP-MIB::ipAddressPrefixAdvValidLifetime."  
::= { ipv6AddrPrefixEntry 6 }
```

-- the IPv6 Address table

-- The IPv6 address table contains this node's IPv6  
-- addressing information.

ipv6AddrTable OBJECT-TYPE

SYNTAX           SEQUENCE OF Ipv6AddrEntry  
MAX-ACCESS   not-accessible  
STATUS        obsolete  
DESCRIPTION  
    "The table of addressing information relevant to  
    this node's interface addresses.  
  
    This table is obsoleted by IP-MIB::ipAddressTable."  
 ::= { ipv6MIBObjects 8 }

ipv6AddrEntry OBJECT-TYPE  
SYNTAX        Ipv6AddrEntry  
MAX-ACCESS   not-accessible  
STATUS        obsolete  
DESCRIPTION  
    "The addressing information for one of this  
    node's interface addresses.  
  
    This entry is obsoleted by IP-MIB::ipAddressEntry."  
INDEX        { ipv6IfIndex, ipv6AddrAddress }  
 ::= { ipv6AddrTable 1 }

Ipv6AddrEntry ::=  
SEQUENCE {  
    ipv6AddrAddress        Ipv6Address,  
    ipv6AddrPfxLength     INTEGER,  
    ipv6AddrType          INTEGER,  
    ipv6AddrAnycastFlag   TruthValue,  
    ipv6AddrStatus        INTEGER  
}

ipv6AddrAddress OBJECT-TYPE  
SYNTAX        Ipv6Address  
MAX-ACCESS   not-accessible  
STATUS        obsolete  
DESCRIPTION  
    "The IPv6 address to which this entry's addressing  
    information pertains.  
  
    This object is obsoleted by IP-MIB::ipAddressAddr."  
 ::= { ipv6AddrEntry 1 }

ipv6AddrPfxLength OBJECT-TYPE  
SYNTAX        INTEGER(0..128)  
UNITS         "bits"  
MAX-ACCESS   read-only  
STATUS        obsolete  
DESCRIPTION



"The length of the prefix (in bits) associated with the IPv6 address of this entry.

This object is obsoleted by the IP-MIB::ipAddressPrefixLength in the row of the IP-MIB::ipAddressPrefixTable to which the IP-MIB::ipAddressPrefix points."  
::= { ipv6AddrEntry 2 }

ipv6AddrType OBJECT-TYPE

SYNTAX INTEGER {  
stateless(1), -- address has been formed  
-- using stateless  
-- autoconfiguration  
stateful(2), -- address has been acquired  
-- by stateful means  
-- (e.g. DHCPv6, manual  
-- configuration)  
unknown(3) -- type can not be determined  
-- for some reason.  
}

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The type of address. Note that 'stateless(1)' refers to an address that was statelessly autoconfigured; 'stateful(2)' refers to a address which was acquired by via a stateful protocol (e.g. DHCPv6, manual configuration).

This object is obsoleted by IP-MIB::ipAddressOrigin."  
::= { ipv6AddrEntry 3 }

ipv6AddrAnycastFlag OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"This object has the value 'true(1)', if this address is an anycast address and the value 'false(2)' otherwise.

This object is obsoleted by a value of 'anycast(2)' in IP-MIB::ipAddressType."  
::= { ipv6AddrEntry 4 }

ipv6AddrStatus OBJECT-TYPE

```

SYNTAX      INTEGER {
    preferred(1),
    deprecated(2),
    invalid(3),
    inaccessible(4),
    unknown(5)    -- status can not be determined
                  -- for some reason.
}

```

```

MAX-ACCESS  read-only

```

```

STATUS      obsolete

```

```

DESCRIPTION

```

"Address status. The preferred(1) state indicates that this is a valid address that can appear as the destination or source address of a packet. The deprecated(2) state indicates that this is a valid but deprecated address that should no longer be used as a source address in new communications, but packets addressed to such an address are processed as expected. The invalid(3) state indicates that this is not valid address which should not appear as the destination or source address of a packet. The inaccessible(4) state indicates that the address is not accessible because the interface to which this address is assigned is not operational.

This object is obsoleted by IP-MIB::ipAddressStatus."  
 ::= { ipv6AddrEntry 5 }

```

-- IPv6 Routing objects

```

```

ipv6RouteNumber OBJECT-TYPE

```

```

    SYNTAX      Gauge32

```

```

    MAX-ACCESS  read-only

```

```

    STATUS      obsolete

```

```

    DESCRIPTION

```

"The number of current ipv6RouteTable entries. This is primarily to avoid having to read the table in order to determine this number.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRouteNumber."  
 ::= { ipv6MIBObjects 9 }

```

ipv6DiscardedRoutes OBJECT-TYPE

```

```

    SYNTAX      Counter32

```

```

    MAX-ACCESS  read-only

```

```

    STATUS      obsolete

```

```

    DESCRIPTION

```

"The number of routing entries which were chosen

to be discarded even though they are valid. One possible reason for discarding such an entry could be to free-up buffer space for other routing entries.

This object is obsoleted by  
 IP-FORWARD-MIB::inetCidrRouteDiscards."  
 ::= { ipv6MIBObjects 10 }

-- IPv6 Routing table

ipv6RouteTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ipv6RouteEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"IPv6 Routing table. This table contains an entry for each valid IPv6 unicast route that can be used for packet forwarding determination.

This table is obsoleted by IP-FORWARD-MIB::inetCidrRouteTable."  
 ::= { ipv6MIBObjects 11 }

ipv6RouteEntry OBJECT-TYPE

SYNTAX Ipv6RouteEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"A routing entry.

This entry is obsoleted by  
 IP-FORWARD-MIB::inetCidrRouteEntry."

INDEX { ipv6RouteDest,  
 ipv6RoutePfxLength,  
 ipv6RouteIndex }

::= { ipv6RouteTable 1 }

Ipv6RouteEntry ::= SEQUENCE {

ipv6RouteDest	Ipv6Address,
ipv6RoutePfxLength	INTEGER,
ipv6RouteIndex	Unsigned32,
ipv6RouteIfIndex	Ipv6IfIndexOrZero,
ipv6RouteNextHop	Ipv6Address,
ipv6RouteType	INTEGER,
ipv6RouteProtocol	INTEGER,
ipv6RoutePolicy	Integer32,
ipv6RouteAge	Unsigned32,

```
        ipv6RouteNextHopRDI      Unsigned32,  
        ipv6RouteMetric          Unsigned32,  
        ipv6RouteWeight          Unsigned32,  
        ipv6RouteInfo            RowPointer,  
        ipv6RouteValid           TruthValue  
    }
```

ipv6RouteDest OBJECT-TYPE

```
SYNTAX      Ipv6Address  
MAX-ACCESS  not-accessible  
STATUS      obsolete  
DESCRIPTION
```

"The destination IPv6 address of this route.  
This object may not take a Multicast address  
value.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRouteDest."  
 ::= { ipv6RouteEntry 1 }

ipv6RoutePfxLength OBJECT-TYPE

```
SYNTAX      INTEGER(0..128)  
UNITS       "bits"  
MAX-ACCESS  not-accessible  
STATUS      obsolete  
DESCRIPTION
```

"Indicates the prefix length of the destination  
address.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRoutePfxLen."  
 ::= { ipv6RouteEntry 2 }

ipv6RouteIndex OBJECT-TYPE

```
SYNTAX      Unsigned32  
MAX-ACCESS  not-accessible  
STATUS      obsolete  
DESCRIPTION
```

"The value which uniquely identifies the route  
among the routes to the same network layer  
destination. The way this value is chosen is  
implementation specific but it must be unique for  
ipv6RouteDest/ipv6RoutePfxLength pair and remain  
constant for the life of the route.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRoutePolicy."  
 ::= { ipv6RouteEntry 3 }

ipv6RouteIfIndex OBJECT-TYPE

```
SYNTAX      Ipv6IfIndexOrZero
```

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The index value which uniquely identifies the local interface through which the next hop of this route should be reached. The interface identified by a particular value of this index is the same interface as identified by the same value of ipv6IfIndex. For routes of the discard type this value can be zero.

This object is obsoleted by

IP-FORWARD-MIB::inetCidrRouteIfIndex."

::= { ipv6RouteEntry 4 }

ipv6RouteNextHop OBJECT-TYPE

SYNTAX Ipv6Address

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"On remote routes, the address of the next system en route; otherwise, ::0 ('00000000000000000000000000000000'H in ASN.1 string representation).

This object is obsoleted by

IP-FORWARD-MIB::inetCidrRouteNextHop."

::= { ipv6RouteEntry 5 }

ipv6RouteType OBJECT-TYPE

SYNTAX INTEGER {

other(1), -- none of the following

-- an route indicating that  
-- packets to destinations  
-- matching this route are

discard(2), -- to be discarded

local(3), -- route to directly  
-- connected (sub-)network

-- route to a remote

remote(4) -- destination

}

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The type of route. Note that 'local(3)' refers to a route for which the next hop is the final destination; 'remote(4)' refers to a route for which the next hop is not the final destination; 'discard(2)' refers to a route indicating that packets to destinations matching this route are to be discarded (sometimes called black-hole route).

This object is obsoleted by IP-FORWARD-MIB::inetCidrRouteType."  
::= { ipv6RouteEntry 6 }

## ipv6RouteProtocol OBJECT-TYPE

SYNTAX INTEGER {  
    other(1), -- none of the following  
              -- non-protocol information,  
              -- e.g., manually configured  
    local(2), -- entries  
    netmgmt(3), -- static route  
              -- obtained via Neighbor  
              -- Discovery protocol,  
    ndisc(4), -- e.g., result of Redirect  
              -- the following are all  
              -- dynamic routing protocols  
    rip(5), -- RIPng  
    ospf(6), -- Open Shortest Path First  
    bgp(7), -- Border Gateway Protocol  
    idrp(8), -- InterDomain Routing Protocol  
    igrp(9) -- InterGateway Routing Protocol  
}

MAX-ACCESS read-only  
STATUS obsolete

## DESCRIPTION

"The routing mechanism via which this route was learned.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRouteProto."  
::= { ipv6RouteEntry 7 }

## ipv6RoutePolicy OBJECT-TYPE

SYNTAX Integer32  
MAX-ACCESS read-only  
STATUS obsolete

## DESCRIPTION

"The general set of conditions that would cause the selection of one multipath route (set of next hops for a given destination) is referred to as 'policy'. Unless the mechanism indicated by ipv6RouteProtocol specified otherwise, the policy specifier is the 8-bit Traffic Class field of the IPv6 packet header that is zero extended at the left to a 32-bit value.

Protocols defining 'policy' otherwise must either define a set of values which are valid for this object or must implement an integer-instanced policy table for which this object's value acts as an index.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRoutePolicy."  
::= { ipv6RouteEntry 8 }

## ipv6RouteAge OBJECT-TYPE

SYNTAX Unsigned32

UNITS "seconds"

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The number of seconds since this route was last updated or otherwise determined to be correct. Note that no semantics of 'too old' can be implied except through knowledge of the routing protocol by which the route was learned.

This object is obsoleted by IP-FORWARD-MIB::inetCidrRouteAge."  
::= { ipv6RouteEntry 9 }

## ipv6RouteNextHopRDI OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The Routing Domain ID of the Next Hop. The semantics of this object are determined by the routing-protocol specified in the route's ipv6RouteProtocol value. When this object is unknown or not relevant its value should be set to zero.

This object is obsolete, and it has no replacement. The Routing Domain ID concept did not catch on."  
::= { ipv6RouteEntry 10 }

## ipv6RouteMetric OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The routing metric for this route. The semantics of this metric are determined by the routing protocol specified in the route's ipv6RouteProtocol value. When this is unknown or not relevant to the protocol indicated by ipv6RouteProtocol, the object value should be set to its maximum value (4,294,967,295).

This object is obsoleted by  
IP-FORWARD-MIB::inetCidrRouteMetric1."

::= { ipv6RouteEntry 11 }

## ipv6RouteWeight OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The system internal weight value for this route. The semantics of this value are determined by the implementation specific rules. Generally, within routes with the same ipv6RoutePolicy value, the lower the weight value the more preferred is the route.

This object is obsoleted, and it has not been replaced."  
::= { ipv6RouteEntry 12 }

## ipv6RouteInfo OBJECT-TYPE

SYNTAX RowPointer

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"A reference to MIB definitions specific to the particular routing protocol which is responsible for this route, as determined by the value specified in the route's ipv6RouteProto value. If this information is not present, its value should be set to the OBJECT ID { 0 0 }, which is a syntactically valid object identifier, and any implementation conforming to ASN.1 and the Basic Encoding Rules must be able to generate and recognize this value.



This object is obsoleted, and it has not been replaced."  
::= { ipv6RouteEntry 13 }

ipv6RouteValid OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS obsolete

DESCRIPTION

"Setting this object to the value 'false(2)' has the effect of invalidating the corresponding entry in the ipv6RouteTable object. That is, it effectively disassociates the destination identified with said entry from the route identified with said entry. It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table. Accordingly, management stations must be prepared to receive tabular information from agents that corresponds to entries not currently in use. Proper interpretation of such entries requires examination of the relevant ipv6RouteValid object.

This object is obsoleted by  
IP-FORWARD-MIB::inetCidrRouteStatus."

DEFVAL { true }

::= { ipv6RouteEntry 14 }

-- IPv6 Address Translation table

ipv6NetToMediaTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ipv6NetToMediaEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"The IPv6 Address Translation table used for mapping from IPv6 addresses to physical addresses.

The IPv6 address translation table contain the Ipv6Address to 'physical' address equivalencies. Some interfaces do not use translation tables for determining address equivalencies; if all interfaces are of this type, then the Address Translation table is empty, i.e., has zero entries.

This table is obsoleted by IP-MIB::ipNetToPhysicalTable."  
::= { ipv6MIBObjects 12 }

```
ipv6NetToMediaEntry OBJECT-TYPE
    SYNTAX      Ipv6NetToMediaEntry
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "Each entry contains one IPv6 address to 'physical'
        address equivalence.

        This entry is obsoleted by IP-MIB::ipNetToPhysicalEntry."
    INDEX      { ipv6IfIndex,
                  ipv6NetToMediaNetAddress }
    ::= { ipv6NetToMediaTable 1 }

Ipv6NetToMediaEntry ::= SEQUENCE {
    ipv6NetToMediaNetAddress
        Ipv6Address,
    ipv6NetToMediaPhysAddress
        PhysAddress,
    ipv6NetToMediaType
        INTEGER,
    ipv6IfNetToMediaState
        INTEGER,
    ipv6IfNetToMediaLastUpdated
        TimeStamp,
    ipv6NetToMediaValid
        TruthValue
}

ipv6NetToMediaNetAddress OBJECT-TYPE
    SYNTAX      Ipv6Address
    MAX-ACCESS  not-accessible
    STATUS      obsolete
    DESCRIPTION
        "The IPv6 Address corresponding to
        the media-dependent 'physical' address.

        This object is obsoleted by IP-MIB::ipNetToPhysicalNetAddress."
    ::= { ipv6NetToMediaEntry 1 }

ipv6NetToMediaPhysAddress OBJECT-TYPE
    SYNTAX      PhysAddress
    MAX-ACCESS  read-only
    STATUS      obsolete
    DESCRIPTION
        "The media-dependent 'physical' address.

        This object is obsoleted by IP-MIB::ipNetToPhysicalPhysAddress."
    ::= { ipv6NetToMediaEntry 2 }
```

## ipv6NetToMediaType OBJECT-TYPE

```
SYNTAX      INTEGER {
    other(1),      -- none of the following
    dynamic(2),    -- dynamically resolved
    static(3),     -- statically configured
    local(4)       -- local interface
}
```

```
MAX-ACCESS  read-only
```

```
STATUS      obsolete
```

## DESCRIPTION

"The type of the mapping. The 'dynamic(2)' type indicates that the IPv6 address to physical addresses mapping has been dynamically resolved using the IPv6 Neighbor Discovery protocol. The static(3)' types indicates that the mapping has been statically configured. The local(4) indicates that the mapping is provided for an entity's own interface address.

This object is obsoleted by IP-MIB::ipNetToPhysicalType."

```
::= { ipv6NetToMediaEntry 3 }
```

## ipv6IfNetToMediaState OBJECT-TYPE

```
SYNTAX      INTEGER {
    reachable(1),  -- confirmed reachability

    stale(2),      -- unconfirmed reachability

    delay(3),      -- waiting for reachability
                  -- confirmation before entering
                  -- the probe state

    probe(4),      -- actively probing

    invalid(5),    -- an invalidated mapping

    unknown(6)     -- state can not be determined
                  -- for some reason.
}
```

```
MAX-ACCESS  read-only
```

```
STATUS      obsolete
```

## DESCRIPTION

"The Neighbor Unreachability Detection [RFC2461] state for the interface when the address mapping in this entry is used.

This object is obsoleted by IP-MIB::ipNetToPhysicalState."

```
::= { ipv6NetToMediaEntry 4 }
```

## ipv6IfNetToMediaLastUpdated OBJECT-TYPE

SYNTAX TimeStamp

MAX-ACCESS read-only

STATUS obsolete

## DESCRIPTION

"The value of sysUpTime at the time this entry was last updated. If this entry was updated prior to the last re-initialization of the local network management subsystem, then this object contains a zero value.

This object is obsoleted by IP-MIB::ipNetToPhysicalLastUpdated."

::= { ipv6NetToMediaEntry 5 }

## ipv6NetToMediaValid OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-write

STATUS obsolete

## DESCRIPTION

"Setting this object to the value 'false(2)' has the effect of invalidating the corresponding entry in the ipv6NetToMediaTable. That is, it effectively disassociates the interface identified with said entry from the mapping identified with said entry. It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table. Accordingly, management stations must be prepared to receive tabular information from agents that corresponds to entries not currently in use. Proper interpretation of such entries requires examination of the relevant ipv6NetToMediaValid object.

This object is obsoleted by IP-MIB::ipNetToPhysicalRowStatus."

DEFVAL { true }

::= { ipv6NetToMediaEntry 6 }

-- definition of IPv6-related notifications.  
-- Note that we need ipv6NotificationPrefix with the 0  
-- sub-identifier to make this MIB to translate to  
-- an SNMPv1 format in a reversible way. For example  
-- it is needed for proxies that convert SNMPv1 traps  
-- to SNMPv2 notifications without MIB knowledge.

## ipv6Notifications OBJECT IDENTIFIER

::= { ipv6MIB 2 }

## ipv6NotificationPrefix OBJECT IDENTIFIER

::= { ipv6Notifications 0 }

```
ipv6IfStateChange NOTIFICATION-TYPE
  OBJECTS {
    ipv6IfDescr,
    ipv6IfOperStatus -- the new state of the If.
  }
  STATUS      obsolete
  DESCRIPTION
    "An ipv6IfStateChange notification signifies
    that there has been a change in the state of
    an ipv6 interface.  This notification should
    be generated when the interface's operational
    status transitions to or from the up(1) state.

    This object is obsoleted by IF-MIB::linkUp
    and IF-MIB::linkDown notifications."
    ::= { ipv6NotificationPrefix 1 }

-- conformance information

ipv6Conformance OBJECT IDENTIFIER ::= { ipv6MIB 3 }

ipv6Compliances OBJECT IDENTIFIER ::= { ipv6Conformance 1 }
ipv6Groups      OBJECT IDENTIFIER ::= { ipv6Conformance 2 }

-- compliance statements

ipv6Compliance MODULE-COMPLIANCE
  STATUS      obsolete
  DESCRIPTION
    "The compliance statement for SNMPv2 entities which
    implement ipv6 MIB.

    This compliance statement is obsoleted by
    IP-MIB::ipMIBCompliance2."
  MODULE -- this module
    MANDATORY-GROUPS { ipv6GeneralGroup,
                        ipv6NotificationGroup }
    OBJECT      ipv6Forwarding
      MIN-ACCESS read-only
      DESCRIPTION
        "An agent is not required to provide write
        access to this object"
    OBJECT      ipv6DefaultHopLimit
      MIN-ACCESS read-only
      DESCRIPTION
        "An agent is not required to provide write
        access to this object"
    OBJECT      ipv6IfDescr
```

```
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"
OBJECT      ipv6IfIdentifier
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"
OBJECT      ipv6IfIdentifierLength
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"

OBJECT      ipv6IfAdminStatus
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"
OBJECT      ipv6RouteValid
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"
OBJECT      ipv6NetToMediaValid
MIN-ACCESS read-only
DESCRIPTION
    "An agent is not required to provide write
    access to this object"

::= { ipv6Compliances 1 }

ipv6GeneralGroup OBJECT-GROUP
OBJECTS { ipv6Forwarding,
          ipv6DefaultHopLimit,
          ipv6Interfaces,
          ipv6IfTableLastChange,
          ipv6IfDescr,
          ipv6IfLowerLayer,
          ipv6IfEffectiveMtu,
          ipv6IfReasmMaxSize,
          ipv6IfIdentifier,
          ipv6IfIdentifierLength,
          ipv6IfPhysicalAddress,
          ipv6IfAdminStatus,
          ipv6IfOperStatus,
          ipv6IfLastChange,
          ipv6IfStatsInReceives,
```

```
ipv6IfStatsInHdrErrors,  
ipv6IfStatsInTooBigErrors,  
ipv6IfStatsInNoRoutes,  
ipv6IfStatsInAddrErrors,  
ipv6IfStatsInUnknownProtos,  
ipv6IfStatsInTruncatedPkts,  
ipv6IfStatsInDiscards,  
ipv6IfStatsInDelivers,  
ipv6IfStatsOutForwDatagrams,  
ipv6IfStatsOutRequests,  
ipv6IfStatsOutDiscards,  
ipv6IfStatsOutFragOKs,  
ipv6IfStatsOutFragFails,  
ipv6IfStatsOutFragCreates,  
ipv6IfStatsReasmReqds,  
ipv6IfStatsReasmOKs,  
ipv6IfStatsReasmFails,  
ipv6IfStatsInMcastPkts,  
ipv6IfStatsOutMcastPkts,  
ipv6AddrPrefixOnLinkFlag,  
ipv6AddrPrefixAutonomousFlag,  
ipv6AddrPrefixAdvPreferredLifetime,  
ipv6AddrPrefixAdvValidLifetime,  
ipv6AddrPfxLength,  
ipv6AddrType,  
ipv6AddrAnycastFlag,  
ipv6AddrStatus,  
ipv6RouteNumber,  
ipv6DiscardedRoutes,  
ipv6RouteIfIndex,  
ipv6RouteNextHop,  
ipv6RouteType,  
ipv6RouteProtocol,  
ipv6RoutePolicy,  
ipv6RouteAge,  
ipv6RouteNextHopRDI,  
ipv6RouteMetric,  
ipv6RouteWeight,  
ipv6RouteInfo,  
ipv6RouteValid,  
ipv6NetToMediaPhysAddress,  
ipv6NetToMediaType,  
ipv6IfNetToMediaState,  
ipv6IfNetToMediaLastUpdated,  
ipv6NetToMediaValid }
```

STATUS       obsolete

DESCRIPTION

"The IPv6 group of objects providing for basic

management of IPv6 entities.

This group is obsoleted by various groups in IP-MIB."

```
::= { ipv6Groups 1 }
```

ipv6NotificationGroup NOTIFICATION-GROUP

NOTIFICATIONS { ipv6IfStateChange }

STATUS obsolete

DESCRIPTION

"The notification that an IPv6 entity is required to implement.

This group is obsoleted by

IF-MIB::linkUpDownNotificationsGroup."

```
::= { ipv6Groups 2 }
```

END

#### 4. Historic IPV6-ICMP-MIB

IPV6-ICMP-MIB DEFINITIONS ::= BEGIN

IMPORTS

MODULE-IDENTITY, OBJECT-TYPE,

Counter32, mib-2

FROM SNMPv2-SMI

MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF

ipv6IfEntry FROM IPV6-MIB;

ipv6IcmpMIB MODULE-IDENTITY

LAST-UPDATED "201702220000Z"

ORGANIZATION "IETF IPv6 Working Group"

CONTACT-INFO

" Dimitry Haskin

Postal: Bay Networks, Inc.  
660 Technology Park Drive.  
Billerica, MA 01821  
US

Tel: +1-978-916-8124

E-mail: dhaskin@baynetworks.com



Steve Onishi

Postal: Bay Networks, Inc.  
3 Federal Street  
Billerica, MA 01821  
US

Tel: +1-978-916-3816  
E-mail: sonishi@baynetworks.com"

DESCRIPTION

"The obsolete MIB module for entities implementing the ICMPv6. Use the IP-MIB instead.

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(<http://trustee.ietf.org/license-info>)."

REVISION "201702220000Z"

DESCRIPTION

"Obsoleting this MIB module; it has been replaced by the revised IP-MIB (RFC 4293)."

REVISION "9801082155Z"

DESCRIPTION

"First revision, published as RFC 2466"  
::= { mib-2 56 }

-- the ICMPv6 group

ipv6IcmpMIBObjects OBJECT IDENTIFIER ::= { ipv6IcmpMIB 1 }

-- Per-interface ICMPv6 statistics table

ipv6IfIcmpTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ipv6IfIcmpEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"IPv6 ICMP statistics. This table contains statistics of ICMPv6 messages that are received and sourced by the entity.

This table is obsolete because systems were found not to maintain these statistics per-interface."  
 ::= { ipv6IcmpMIBObjects 1 }

ipv6IfIcmpEntry OBJECT-TYPE

SYNTAX Ipv6IfIcmpEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"An ICMPv6 statistics entry containing objects at a particular IPv6 interface.

Note that a receiving interface is the interface to which a given ICMPv6 message is addressed which may not be necessarily the input interface for the message.

Similarly, the sending interface is the interface that sources a given ICMP message which is usually but not necessarily the output interface for the message.

This table is obsolete because systems were found not to maintain these statistics per-interface."

AUGMENTS { ipv6IfEntry }

::= { ipv6IfIcmpTable 1 }

Ipv6IfIcmpEntry ::= SEQUENCE {

ipv6IfIcmpInMsgs

Counter32 ,

ipv6IfIcmpInErrors

Counter32 ,

ipv6IfIcmpInDestUnreachs

Counter32 ,

ipv6IfIcmpInAdminProhibs

Counter32 ,

ipv6IfIcmpInTimeExcds

Counter32 ,

ipv6IfIcmpInParmProblems

Counter32 ,

ipv6IfIcmpInPktTooBigs

Counter32 ,

ipv6IfIcmpInEchos

Counter32 ,

ipv6IfIcmpInEchoReplies

Counter32 ,

ipv6IfIcmpInRouterSolicits

Counter32 ,

```
ipv6IfIcmpInRouterAdvertisements
    Counter32 ,
ipv6IfIcmpInNeighborSolicits
    Counter32 ,
ipv6IfIcmpInNeighborAdvertisements
    Counter32 ,
ipv6IfIcmpInRedirects
    Counter32 ,
ipv6IfIcmpInGroupMembQueries
    Counter32 ,
ipv6IfIcmpInGroupMembResponses
    Counter32 ,
ipv6IfIcmpInGroupMembReductions
    Counter32 ,
ipv6IfIcmpOutMsgs
    Counter32 ,
ipv6IfIcmpOutErrors
    Counter32 ,
ipv6IfIcmpOutDestUnreachs
    Counter32 ,
ipv6IfIcmpOutAdminProhibs
    Counter32 ,
ipv6IfIcmpOutTimeExcds
    Counter32 ,
ipv6IfIcmpOutParmProblems
    Counter32 ,
ipv6IfIcmpOutPktTooBig
    Counter32 ,
ipv6IfIcmpOutEchos
    Counter32 ,
ipv6IfIcmpOutEchoReplies
    Counter32 ,
ipv6IfIcmpOutRouterSolicits
    Counter32 ,
ipv6IfIcmpOutRouterAdvertisements
    Counter32 ,
ipv6IfIcmpOutNeighborSolicits
    Counter32 ,
ipv6IfIcmpOutNeighborAdvertisements
    Counter32 ,
ipv6IfIcmpOutRedirects
    Counter32 ,
ipv6IfIcmpOutGroupMembQueries
    Counter32 ,
ipv6IfIcmpOutGroupMembResponses
    Counter32 ,
ipv6IfIcmpOutGroupMembReductions
    Counter32
```

}

ipv6IfIcmpInMsgs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The total number of ICMP messages received by the interface which includes all those counted by ipv6IfIcmpInErrors. Note that this interface is the interface to which the ICMP messages were addressed which may not be necessarily the input interface for the messages.

This object has been obsoleted by IP-MIB::icmpStatsInMsgs."

::= { ipv6IfIcmpEntry 1 }

ipv6IfIcmpInErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP messages which the interface received but determined as having ICMP-specific errors (bad ICMP checksums, bad length, etc.).

This object has been obsoleted by IP-MIB::icmpStatsInErrors."

::= { ipv6IfIcmpEntry 2 }

ipv6IfIcmpInDestUnreachs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Destination Unreachable messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 3 }

ipv6IfIcmpInAdminProhibs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP destination unreachable/communication administratively

prohibited messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 4 }

ipv6IfIcmpInTimeExcds OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Time Exceeded messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 5 }

ipv6IfIcmpInParmProblems OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Parameter Problem messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 6 }

ipv6IfIcmpInPktTooBigs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Packet Too Big messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 7 }

ipv6IfIcmpInEchos OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Echo (request) messages

received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 8 }

ipv6IfIcmpInEchoReplies OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Echo Reply messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 9 }

ipv6IfIcmpInRouterSolicits OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Router Solicit messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 10 }

ipv6IfIcmpInRouterAdvertisements OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Router Advertisement messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 11 }

ipv6IfIcmpInNeighborSolicits OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Neighbor Solicit messages

received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 12 }

ipv6IfIcmpInNeighborAdvertisements OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP Neighbor Advertisement messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 13 }

ipv6IfIcmpInRedirects OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of Redirect messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 14 }

ipv6IfIcmpInGroupMembQueries OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMPv6 Group Membership Query messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 15 }

ipv6IfIcmpInGroupMembResponses OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMPv6 Group Membership Response messages

received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 16 }

ipv6IfIcmpInGroupMembReductions OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMPv6 Group Membership Reduction messages received by the interface.

This object has been obsoleted by IP-MIB::icmpMsgStatsInPkts in the row corresponding to this message type."

::= { ipv6IfIcmpEntry 17 }

ipv6IfIcmpOutMsgs OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The total number of ICMP messages which this interface attempted to send. Note that this counter includes all those counted by icmpOutErrors.

This object has been obsoleted by IP-MIB::icmpStatsOutMsgs."

::= { ipv6IfIcmpEntry 18 }

ipv6IfIcmpOutErrors OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS obsolete

DESCRIPTION

"The number of ICMP messages which this interface did not send due to problems discovered within ICMP such as a lack of buffers. This value should not include errors discovered outside the ICMP layer such as the inability of IPv6 to route the resultant datagram. In some implementations there may be no types of error which contribute to this counter's value.

This object has been obsoleted by IP-MIB::icmpStatsOutErrors."

::= { ipv6IfIcmpEntry 19 }

ipv6IfIcmpOutDestUnreachs OBJECT-TYPE



SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Destination Unreachable  
messages sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 20 }

ipv6IfIcmpOutAdminProhibs OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"Number of ICMP dest unreachable/communication  
administratively prohibited messages sent.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 21 }

ipv6IfIcmpOutTimeExcds OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Time Exceeded messages sent  
by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 22 }

ipv6IfIcmpOutParmProblems OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Parameter Problem messages  
sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 23 }

ipv6IfIcmpOutPktTooBigs OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Packet Too Big messages sent  
by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 24 }

ipv6IfIcmpOutEchos OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Echo (request) messages sent  
by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 25 }

ipv6IfIcmpOutEchoReplies OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Echo Reply messages sent  
by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 26 }

ipv6IfIcmpOutRouterSolicits OBJECT-TYPE  
SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Router Solicitation messages  
sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts  
in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 27 }

ipv6IfIcmpOutRouterAdvertisements OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Router Advertisement messages sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 28 }

ipv6IfIcmpOutNeighborSolicits OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Neighbor Solicitation messages sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 29 }

ipv6IfIcmpOutNeighborAdvertisements OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of ICMP Neighbor Advertisement messages sent by the interface.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 30 }

ipv6IfIcmpOutRedirects OBJECT-TYPE

SYNTAX Counter32  
MAX-ACCESS read-only  
STATUS obsolete  
DESCRIPTION  
"The number of Redirect messages sent. For a host, this object will always be zero, since hosts do not send redirects.  
  
This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."  
::= { ipv6IfIcmpEntry 31 }

`ipv6IfIcmpOutGroupMembQueries OBJECT-TYPE``SYNTAX Counter32``MAX-ACCESS read-only``STATUS obsolete``DESCRIPTION`

"The number of ICMPv6 Group Membership Query messages sent.

This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."

`::= { ipv6IfIcmpEntry 32}``ipv6IfIcmpOutGroupMembResponses OBJECT-TYPE``SYNTAX Counter32``MAX-ACCESS read-only``STATUS obsolete``DESCRIPTION`

"The number of ICMPv6 Group Membership Response messages sent.

This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."

`::= { ipv6IfIcmpEntry 33}``ipv6IfIcmpOutGroupMembReductions OBJECT-TYPE``SYNTAX Counter32``MAX-ACCESS read-only``STATUS obsolete``DESCRIPTION`

"The number of ICMPv6 Group Membership Reduction messages sent.

This object has been obsoleted by IP-MIB::icmpMsgStatsOutPkts in the row corresponding to this message type."

`::= { ipv6IfIcmpEntry 34}``-- conformance information``ipv6IcmpConformance OBJECT IDENTIFIER ::= { ipv6IcmpMIB 2 }``ipv6IcmpCompliances``OBJECT IDENTIFIER ::= { ipv6IcmpConformance 1 }``ipv6IcmpGroups``OBJECT IDENTIFIER ::= { ipv6IcmpConformance 2 }``-- compliance statements``ipv6IcmpCompliance MODULE-COMPLIANCE`

```
STATUS    obsolete
DESCRIPTION
    "The compliance statement for SNMPv2 entities which
    implement ICMPv6.
```

```
    This compliance statement has been obsoleted by
    IP-MIB::ipMIBCompliance2."
```

```
MODULE -- this module
    MANDATORY-GROUPS { ipv6IcmpGroup }
    ::= { ipv6IcmpCompliances 1 }
```

```
ipv6IcmpGroup OBJECT-GROUP
```

```
OBJECTS {
    ipv6IfIcmpInMsgs,
    ipv6IfIcmpInErrors,
    ipv6IfIcmpInDestUnreachs,
    ipv6IfIcmpInAdminProhibs,
    ipv6IfIcmpInTimeExcds,
    ipv6IfIcmpInParmProblems,
    ipv6IfIcmpInPktTooBigs,
    ipv6IfIcmpInEchos,
    ipv6IfIcmpInEchoReplies,
    ipv6IfIcmpInRouterSolicits,
    ipv6IfIcmpInRouterAdvertisements,
    ipv6IfIcmpInNeighborSolicits,
    ipv6IfIcmpInNeighborAdvertisements,
    ipv6IfIcmpInRedirects,
    ipv6IfIcmpInGroupMembQueries,
    ipv6IfIcmpInGroupMembResponses,
    ipv6IfIcmpInGroupMembReductions,
    ipv6IfIcmpOutMsgs,
    ipv6IfIcmpOutErrors,
    ipv6IfIcmpOutDestUnreachs,
    ipv6IfIcmpOutAdminProhibs,
    ipv6IfIcmpOutTimeExcds,
    ipv6IfIcmpOutParmProblems,
    ipv6IfIcmpOutPktTooBigs,
    ipv6IfIcmpOutEchos,
    ipv6IfIcmpOutEchoReplies,
    ipv6IfIcmpOutRouterSolicits,
    ipv6IfIcmpOutRouterAdvertisements,
    ipv6IfIcmpOutNeighborSolicits,
    ipv6IfIcmpOutNeighborAdvertisements,
    ipv6IfIcmpOutRedirects,
    ipv6IfIcmpOutGroupMembQueries,
    ipv6IfIcmpOutGroupMembResponses,
    ipv6IfIcmpOutGroupMembReductions
}
```

```

STATUS      obsolete
DESCRIPTION
    "The ICMPv6 group of objects providing information
    specific to ICMPv6.

    This group has been obsoleted by IP-MIB::icmpStatsGroup."
 ::= { ipv6IcmpGroups 1 }

```

END

## 5. Historic IPV6-UDP-MIB

IPV6-UDP-MIB DEFINITIONS ::= BEGIN

### IMPORTS

```

MODULE-COMPLIANCE, OBJECT-GROUP      FROM SNMPv2-CONF
MODULE-IDENTITY, OBJECT-TYPE,
mib-2, experimental                  FROM SNMPv2-SMI
Ipv6Address, Ipv6IfIndexOrZero       FROM IPV6-TC;

```

### ipv6UdpMIB MODULE-IDENTITY

```

LAST-UPDATED "201702220000Z"
ORGANIZATION "IETF IPv6 MIB Working Group"
CONTACT-INFO
    "

```

Mike Daniele

Postal: Compaq Computer Corporation  
 110 Spitbrook Rd  
 Nashua, NH 03062.  
 US

Phone: +1 603 884 1423  
 Email: daniele@zk3.dec.com"

### DESCRIPTION

"The obsolete MIB module for entities implementing UDP over IPv6. Use the UDP-MIB instead.

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REVISION "201702220000Z"

DESCRIPTION

```
        "Obsoleting this MIB module; it has been replaced by
        the revised UDP-MIB (RFC 4113)."
```

REVISION "9801290000Z"

DESCRIPTION

```
        "First revision, published as RFC 2454"
 ::= { experimental 87 }
```

-- objects specific to UDP for IPv6

udp OBJECT IDENTIFIER ::= { mib-2 7 }

-- the UDP over IPv6 Listener table

-- This table contains information about this entity's  
-- UDP/IPv6 endpoints. Only endpoints utilizing IPv6 addresses  
-- are contained in this table. This entity's UDP/IPv4 endpoints  
-- are contained in udpTable.

ipv6UdpTable OBJECT-TYPE

```
SYNTAX      SEQUENCE OF Ipv6UdpEntry
MAX-ACCESS  not-accessible
STATUS      obsolete
DESCRIPTION
    "A table containing UDP listener information for
    UDP/IPv6 endpoints.

    This table is obsoleted by UDP-MIB::udpEndpointTable."
 ::= { udp 6 }
```

ipv6UdpEntry OBJECT-TYPE

```
SYNTAX      Ipv6UdpEntry
MAX-ACCESS  not-accessible
STATUS      obsolete
DESCRIPTION
    "Information about a particular current UDP listener.

    Note that conceptual rows in this table require an
    additional index object compared to udpTable, since
    IPv6 addresses are not guaranteed to be unique on the
    managed node.

    This entry is obsoleted by UDP-MIB::udpEndpointTable."
INDEX      { ipv6UdpLocalAddress,
             ipv6UdpLocalPort,
             ipv6UdpIfIndex }
 ::= { ipv6UdpTable 1 }
```

Ipv6UdpEntry ::= SEQUENCE {

```
ipv6UdpLocalAddress    Ipv6Address,
ipv6UdpLocalPort       INTEGER,
ipv6UdpIfIndex         Ipv6IfIndexOrZero }
```

ipv6UdpLocalAddress OBJECT-TYPE

```
SYNTAX      Ipv6Address
MAX-ACCESS  not-accessible
STATUS      obsolete
DESCRIPTION
```

"The local IPv6 address for this UDP listener.  
In the case of a UDP listener which is willing  
to accept datagrams for any IPv6 address  
associated with the managed node, the value ::0  
is used.

This object is obsoleted by UDP-MIB::udpEndpointLocalAddress."  
::= { ipv6UdpEntry 1 }

ipv6UdpLocalPort OBJECT-TYPE

```
SYNTAX      INTEGER (0..65535)
MAX-ACCESS  not-accessible
STATUS      obsolete
DESCRIPTION
```

"The local port number for this UDP listener.

This object is obsoleted by UDP-MIB::udpEndpointLocalPort."  
::= { ipv6UdpEntry 2 }

ipv6UdpIfIndex OBJECT-TYPE

```
SYNTAX      Ipv6IfIndexOrZero
MAX-ACCESS  read-only
STATUS      obsolete
DESCRIPTION
```

"An index object used to disambiguate conceptual rows in  
the table, since the ipv6UdpLocalAddress/ipv6UdpLocalPort  
pair may not be unique.

This object identifies the local interface that is  
associated with ipv6UdpLocalAddress for this UDP listener.  
If such a local interface cannot be determined, this object  
should take on the value 0. (A possible example of this  
would be if the value of ipv6UdpLocalAddress is ::0.)

The interface identified by a particular non-0 value of  
this index is the same interface as identified by the same  
value of ipv6IfIndex.

The value of this object must remain constant during



```
the life of this UDP endpoint.

This object is obsoleted by the zone identifier in
an InetAddressIPv6z address in
UDP-MIB::udpEndpointLocalAddress."
::= { ipv6UdpEntry 3 }

--
-- conformance information
--

ipv6UdpConformance OBJECT IDENTIFIER ::= { ipv6UdpMIB 2 }

ipv6UdpCompliances OBJECT IDENTIFIER ::= { ipv6UdpConformance 1 }
ipv6UdpGroups      OBJECT IDENTIFIER ::= { ipv6UdpConformance 2 }

-- compliance statements

ipv6UdpCompliance MODULE-COMPLIANCE
  STATUS      obsolete
  DESCRIPTION
    "The compliance statement for SNMPv2 entities which
    implement UDP over IPv6.

    This object is obsoleted by UDP-MIB::udpMIBCompliance2."
  MODULE      -- this module
  MANDATORY-GROUPS { ipv6UdpGroup }
  ::= { ipv6UdpCompliances 1 }

ipv6UdpGroup OBJECT-GROUP
  OBJECTS      { -- these are defined in this module
                  -- ipv6UdpLocalAddress (not-accessible)
                  -- ipv6UdpLocalPort (not-accessible)
                  ipv6UdpIfIndex }
  STATUS      obsolete
  DESCRIPTION
    "The group of objects providing management of
    UDP over IPv6.

    This group is obsoleted by several groups in UDP-MIB."
  ::= { ipv6UdpGroups 1 }

END
```

## 6. Historic IPV6-TCP-MIB

```
IPV6-TCP-MIB DEFINITIONS ::= BEGIN
```

## IMPORTS

```
    MODULE-COMPLIANCE, OBJECT-GROUP      FROM SNMPv2-CONF
    MODULE-IDENTITY, OBJECT-TYPE,
    mib-2, experimental                  FROM SNMPv2-SMI
    Ipv6Address, Ipv6IfIndexOrZero       FROM IPV6-TC;
```

## ipv6TcpMIB MODULE-IDENTITY

```
    LAST-UPDATED "201702220000Z"
    ORGANIZATION "IETF IPv6 MIB Working Group"
    CONTACT-INFO
        "          Mike Daniele
```

```
        Postal: Compaq Computer Corporation
                110 Spitbrook Rd
                Nashua, NH 03062.
                US
```

```
        Phone:  +1 603 884 1423
        Email:   daniele@zk3.dec.com"
```

## DESCRIPTION

```
"The obsolete MIB module for entities implementing TCP
over IPv6.  Use the TCP-MIB instead.
```

```
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```

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(http://trustee.ietf.org/license-info)."
```

```
REVISION "201702220000Z"
```

## DESCRIPTION

```
"Obsoleting this MIB module; it has been replaced by
the revised TCP-MIB (RFC 4022)."
```

```
REVISION "9801290000Z"
```

## DESCRIPTION

```
"First revision, published as RFC 2452"
```

```
::= { experimental 86 }
```

```
-- objects specific to TCP for IPv6
```

```
tcp      OBJECT IDENTIFIER ::= { mib-2 6 }
```

-- the TCP over IPv6 Connection table

-- This connection table contains information about this  
 -- entity's existing TCP connections between IPv6 endpoints.  
 -- Only connections between IPv6 addresses are contained in  
 -- this table. This entity's connections between IPv4  
 -- endpoints are contained in tcpConnTable.

ipv6TcpConnTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ipv6TcpConnEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"A table containing TCP connection-specific information,  
 for only those connections whose endpoints are IPv6 addresses.

This table is obsoleted by TCP-MIB::tcpConnectionTable."

::= { tcp 16 }

ipv6TcpConnEntry OBJECT-TYPE

SYNTAX Ipv6TcpConnEntry

MAX-ACCESS not-accessible

STATUS obsolete

DESCRIPTION

"A conceptual row of the ipv6TcpConnTable containing  
 information about a particular current TCP connection.  
 Each row of this table is transient, in that it ceases to  
 exist when (or soon after) the connection makes the transition  
 to the CLOSED state.

Note that conceptual rows in this table require an additional  
 index object compared to tcpConnTable, since IPv6 addresses  
 are not guaranteed to be unique on the managed node.

This entry is obsoleted by TCP-MIB::tcpConnectionEntry."

INDEX { ipv6TcpConnLocalAddress,  
 ipv6TcpConnLocalPort,  
 ipv6TcpConnRemAddress,  
 ipv6TcpConnRemPort,  
 ipv6TcpConnIfIndex }

::= { ipv6TcpConnTable 1 }

Ipv6TcpConnEntry ::=

SEQUENCE {	ipv6TcpConnLocalAddress	Ipv6Address,
	ipv6TcpConnLocalPort	INTEGER,
	ipv6TcpConnRemAddress	Ipv6Address,
	ipv6TcpConnRemPort	INTEGER,
	ipv6TcpConnIfIndex	Ipv6IfIndexOrZero,

ipv6TcpConnState                    INTEGER }

ipv6TcpConnLocalAddress OBJECT-TYPE

SYNTAX        Ipv6Address

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"The local IPv6 address for this TCP connection. In the case of a connection in the listen state which is willing to accept connections for any IPv6 address associated with the managed node, the value ::0 is used.

This object is obsoleted by  
TCP-MIB::tcpConnectionLocalAddressType."

::= { ipv6TcpConnEntry 1 }

ipv6TcpConnLocalPort OBJECT-TYPE

SYNTAX        INTEGER (0..65535)

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"The local port number for this TCP connection.

This object is obsoleted by TCP-MIB::tcpConnectionLocalPort."

::= { ipv6TcpConnEntry 2 }

ipv6TcpConnRemAddress OBJECT-TYPE

SYNTAX        Ipv6Address

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"The remote IPv6 address for this TCP connection.

This object is obsoleted by TCP-MIB::tcpConnectionRemAddress."

::= { ipv6TcpConnEntry 3 }

ipv6TcpConnRemPort OBJECT-TYPE

SYNTAX        INTEGER (0..65535)

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"The remote port number for this TCP connection.

This object is obsoleted by TCP-MIB::tcpConnectionRemPort."

::= { ipv6TcpConnEntry 4 }

ipv6TcpConnIfIndex OBJECT-TYPE

SYNTAX        Ipv6IfIndexOrZero

MAX-ACCESS not-accessible

STATUS        obsolete

DESCRIPTION

"An index object used to disambiguate conceptual rows in the table, since the connection 4-tuple may not be unique.

If the connection's remote address (ipv6TcpConnRemAddress) is a link-local address and the connection's local address (ipv6TcpConnLocalAddress) is not a link-local address, this object identifies a local interface on the same link as the connection's remote link-local address.

Otherwise, this object identifies the local interface that is associated with the ipv6TcpConnLocalAddress for this TCP connection. If such a local interface cannot be determined, this object should take on the value 0. (A possible example of this would be if the value of ipv6TcpConnLocalAddress is ::0.)

The interface identified by a particular non-0 value of this index is the same interface as identified by the same value of ipv6IfIndex.

The value of this object must remain constant during the life of the TCP connection.

This object is obsoleted by the zone identifier in an InetAddressIPv6z address in either TCP-MIB::tcpConnectionLocalAddress or TCP-MIB::tcpConnectionRemAddress."

::= { ipv6TcpConnEntry 5 }

ipv6TcpConnState OBJECT-TYPE

SYNTAX        INTEGER {  
    closed(1),  
    listen(2),  
    synSent(3),  
    synReceived(4),  
    established(5),  
    finWait1(6),  
    finWait2(7),  
    closeWait(8),  
    lastAck(9),  
    closing(10),  
    timeWait(11),  
    deleteTCB(12) }

MAX-ACCESS read-write

STATUS        obsolete

DESCRIPTION

"The state of this TCP connection.

The only value which may be set by a management station is deleteTCB(12). Accordingly, it is appropriate for an agent to return an error response ('badValue' for SNMPv1, 'wrongValue' for SNMPv2) if a management station attempts to set this object to any other value.

If a management station sets this object to the value deleteTCB(12), then this has the effect of deleting the TCB (as defined in RFC 793) of the corresponding connection on the managed node, resulting in immediate termination of the connection.

As an implementation-specific option, a RST segment may be sent from the managed node to the other TCP endpoint (note however that RST segments are not sent reliably).

This object is obsoleted by TCP-MIB::tcpConnectionState."

::= { ipv6TcpConnEntry 6 }

--

-- conformance information

--

ipv6TcpConformance OBJECT IDENTIFIER ::= { ipv6TcpMIB 2 }

ipv6TcpCompliances OBJECT IDENTIFIER ::= { ipv6TcpConformance 1 }

ipv6TcpGroups        OBJECT IDENTIFIER ::= { ipv6TcpConformance 2 }

-- compliance statements

ipv6TcpCompliance MODULE-COMPLIANCE

STATUS    obsolete

DESCRIPTION

"The compliance statement for SNMPv2 entities which implement TCP over IPv6.

This compliance statement is obsoleted by TCP-MIB::tcpMIBCompliance2."

MODULE    -- this module

MANDATORY-GROUPS { ipv6TcpGroup }

::= { ipv6TcpCompliances 1 }

ipv6TcpGroup OBJECT-GROUP

OBJECTS    { -- these are defined in this module

```
-- ipv6TcpConnLocalAddress (not-accessible)
-- ipv6TcpConnLocalPort (not-accessible)
-- ipv6TcpConnRemAddress (not-accessible)
-- ipv6TcpConnRemPort (not-accessible)
-- ipv6TcpConnIfIndex (not-accessible)
  ipv6TcpConnState }
STATUS      obsolete
DESCRIPTION
  "The group of objects providing management of
  TCP over IPv6.

  This group is obsoleted by several groups in TCP-MIB."
 ::= { ipv6TcpGroups 1 }
```

END

## 7. Reclassification

This document reclassifies [RFC2452], [RFC2454], [RFC2465], and [RFC2466] to Historic.

## 8. Security Considerations

This document contains only obsolete objects, which [RFC2578] says "should not be implemented and/or can be removed if previously implemented". Since the contents of this document should not be implemented, it has no security implications. If there were any security implications based on these objects in an implementation, removing these objects as [RFC2578] suggests would improve the security of that implementation.

## 9. IANA Considerations

IANA has updated the SMI Numbers registry at <http://www.iana.org/assignments/smi-numbers/> as described below.

IANA has updated the "SMI Network Management MGMT Codes Internet-standard MIB" section as follows:

- o Removed RFC 1213 as a reference for mib-2.5 ("icmp").
- o Updated the reference for mib-2.6 ("tcp") to point to RFC 4022.
- o Removed RFC 1213 as a reference for mib-2.7 ("udp").
- o Removed RFC 2012 as a reference for mib-2.49 ("tcpMIB").

- o Added the "(Historic)" annotation for the entries for mib-2.55 ("ipv6MIB") and mib-2.56 ("ipv6IcmpMIB") and updated the reference of each to point to this document.

IANA has updated the "SMI Experimental Codes" section as follows:

- o Added the "(Historic)" annotation for experimental.74 ("IPv6 MIB").
- o Changed the "(Historical)" annotation for experimental.87 ("ipv6UdpMIB") to "(Historic)".
- o Updated the reference for experimental.86 ("ipv6TcpMIB") and experimental.87 ("ipv6UdpMIB") to point to this document.

## 10. References

### 10.1. Normative References

- [RFC2578] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Structure of Management Information Version 2 (SMIv2)", STD 58, RFC 2578, DOI 10.17487/RFC2578, April 1999, <<http://www.rfc-editor.org/info/rfc2578>>.

### 10.2. Informative References

- [RFC1213] McCloghrie, K. and M. Rose, "Management Information Base for Network Management of TCP/IP-based internets: MIB-II", STD 17, RFC 1213, DOI 10.17487/RFC1213, March 1991, <<http://www.rfc-editor.org/info/rfc1213>>.
- [RFC1573] McCloghrie, K. and F. Kastenholtz, "Evolution of the Interfaces Group of MIB-II", RFC 1573, DOI 10.17487/RFC1573, January 1994, <<http://www.rfc-editor.org/info/rfc1573>>.
- [RFC2452] Daniele, M., "IP Version 6 Management Information Base for the Transmission Control Protocol", RFC 2452, DOI 10.17487/RFC2452, December 1998, <<http://www.rfc-editor.org/info/rfc2452>>.
- [RFC2454] Daniele, M., "IP Version 6 Management Information Base for the User Datagram Protocol", RFC 2454, DOI 10.17487/RFC2454, December 1998, <<http://www.rfc-editor.org/info/rfc2454>>.



- [RFC2461] Narten, T., Nordmark, E., and W. Simpson, "Neighbor Discovery for IP Version 6 (IPv6)", RFC 2461, DOI 10.17487/RFC2461, December 1998, <<http://www.rfc-editor.org/info/rfc2461>>.
- [RFC2465] Haskin, D. and S. Onishi, "Management Information Base for IP Version 6: Textual Conventions and General Group", RFC 2465, DOI 10.17487/RFC2465, December 1998, <<http://www.rfc-editor.org/info/rfc2465>>.
- [RFC2466] Haskin, D. and S. Onishi, "Management Information Base for IP Version 6: ICMPv6 Group", RFC 2466, DOI 10.17487/RFC2466, December 1998, <<http://www.rfc-editor.org/info/rfc2466>>.
- [RFC4022] Raghunarayan, R., Ed., "Management Information Base for the Transmission Control Protocol (TCP)", RFC 4022, DOI 10.17487/RFC4022, March 2005, <<http://www.rfc-editor.org/info/rfc4022>>.
- [RFC4113] Fenner, B. and J. Flick, "Management Information Base for the User Datagram Protocol (UDP)", RFC 4113, DOI 10.17487/RFC4113, June 2005, <<http://www.rfc-editor.org/info/rfc4113>>.
- [RFC4292] Haberman, B., "IP Forwarding Table MIB", RFC 4292, DOI 10.17487/RFC4292, April 2006, <<http://www.rfc-editor.org/info/rfc4292>>.
- [RFC4293] Routhier, S., Ed., "Management Information Base for the Internet Protocol (IP)", RFC 4293, DOI 10.17487/RFC4293, April 2006, <<http://www.rfc-editor.org/info/rfc4293>>.

#### Author's Address

Bill Fenner  
Arista Networks, Inc.  
5453 Great America Parkway  
Santa Clara, CA 95054  
United States of America

Phone: +1-408-547-5572  
Email: [fenner@fenron.com](mailto:fenner@fenron.com)

