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The IPv6-Specific MIB Modules Are Obsolete

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### 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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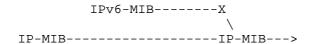
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### 1. Motivation

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).



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.

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# 2. Historic IPV6-TC

```
IPV6-TC DEFINITIONS ::= BEGIN

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#### **IMPORTS**

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

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

-- 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))

 ${\tt Ipv6AddressPrefix} ::= {\tt TEXTUAL-CONVENTION}$ 

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."
YNTAX OCTET STRING (SIZE (0..16))

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."

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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

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### 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,

FROM IPV6-TC; Ipv6IfIndexOrZero

## ipv6MIB MODULE-IDENTITY

LAST-UPDATED "201702220000Z"

ORGANIZATION "IETF IPv6 Working Group"

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# DESCRIPTION

"The obsolete MIB module for entities implementing the IPv6 protocol. Use the IP-MIB or IP-FORWARD-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 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
      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
                                   DisplayString,
        ipv6IfDescr
        ipv6ItDescr
ipv6IfLowerLayer
ipv6IfEffectiveMtu
ipv6IfReasmMaxSize
ipv6IfIdentifier
VariablePointer,
Unsigned32,
Ipv6Identifier
Ipv6AddressIfIdentifier,
        ipv6IfIdentifierLength INTEGER,
        ipv6IfPhysicalAddress PhysAddress,
ipv6IfAdminStatus INTEGER,
ipv6IfOperStatus INTEGER,
ipv6IfLastChange TimeStamp
                                   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
              "octets"
  UNITS
  MAX-ACCESS read-only
  STATUS
             obsolete
  DESCRIPTION
    "The size of the largest IPv6 packet which can be
    sent/received on the interface, specified in
```

```
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 {
                       -- ready to pass packets
            up(1),
            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
```

```
-- determined for some
            unknown(4),
                               -- reason
                               -- some component is
                               -- missing
            notPresent(5)
   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
```

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```
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
              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."
```

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```
::= { 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
            obsolete
   STATUS
   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)
               "bits"
   UNITS
   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
```

```
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
              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,
        ipv6AddrType
ipv6AddrAnycastFlag TruthValue,
inv6AddrStatus 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
              INTEGER {
                      -- address has been formed
                      -- using stateless
       stateless(1), -- autoconfiguration
                      -- address has been acquired
                      -- by stateful means
                      -- (e.g. DHCPv6, manual
        stateful(2),
                      -- configuration)
                      -- type can not be determined
       unknown(3) -- for some reason.
  MAX-ACCESS read-only
             obsolete
   STATUS
  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
```

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```
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."
           { ipv6RouteDest,
             ipv6RoutePfxLength,
             ipv6RouteIndex }
   ::= { ipv6RouteTable 1 }
       Ipv6RouteEntry ::= SEQUENCE {
       ipv6RouteProtocol INTEGER,
ipv6RoutePolicy Integer32,
       ipv6RouteAge
                              Unsigned32,
```

```
ipv6RouteValid
   }
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)
             "bits"
   UNITS
   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
     ('00000000000000000000000000000000000'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
                    -- route to directly
      local(3),
                    -- 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
                  -- RIPng
      rip(5),
     ospf(6), -- Open Shortest Path First
bgp(7), -- Border Gateway Protocol
idrp(8), -- InterDomain Routing Protocol
                 -- InterGateway Routing Protocol
     igrp(9)
   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 integerinstanced 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 }

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```
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."
            { 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
               INTEGER {
     SYNTAX
                 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.
                       obsolete
     STATUS
    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 }
           OBJECT IDENTIFIER ::= { ipv6Conformance 2 }
ipv6Groups
-- 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"
                  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
```

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```
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 inv61fEntry 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
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```

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```

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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 ,
ipv6IfIcmpOutPktTooBigs
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
```

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```
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
           Counter32
   SYNTAX
   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
```

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```
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
            Counter32
   SYNTAX
   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
            Counter32
   SYNTAX
   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
    "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
```

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```
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"

REVISION "201/022200002"

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
        OBJECT IDENTIFIER ::= { mib-2 7 }
udp
-- 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
         Ipv6Address
  SYNTAX
  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
```

The value of this object must remain constant during

value of ipv6IfIndex.

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this index is the same interface as identified by the same

```
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 }
-- 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
        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 "LETE IPv6 MIB Work

ORGANIZATION "IETF IPv6 MIB Working Group" CONTACT-INFO

" Mike Daniele

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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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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 }

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```
-- 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
             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
```

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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 <a href="http://www.iana.org/assignments/smi-numbers/">http://www.iana.org/assignments/smi-numbers/</a> 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,
 <a href="http://www.rfc-editor.org/info/rfc2578">http://www.rfc-editor.org/info/rfc2578</a>.

## 10.2. Informative References

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- [RFC4113] Fenner, B. and J. Flick, "Management Information Base for the User Datagram Protocol (UDP)", RFC 4113, DOI 10.17487/RFC4113, June 2005, <a href="http://www.rfc-editor.org/info/rfc4113">http://www.rfc-editor.org/info/rfc4113</a>.

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