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Precision Time Protocol Version 2 (PTPv2)
Management Information Base

Abstract

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in internets based on TCP or IP. In particular, it defines objects for managing networks using the Precision Time Protocol (PTP), specified in IEEE Std. 1588-2008.

This memo specifies a MIB module in a manner that is both compliant to the Structure of Management Information version 2 (SMIv2) and semantically identical to the peer SMIv1 definitions.

Status of This Memo

This is an Internet Standards Track document.

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1. Introduction

This memo defines a portion of the Management Information Base (MIB) module for use with network management protocols in the Internet community. In particular, it describes managed objects used for managing PTP devices including ordinary clocks, transparent clocks, and boundary clocks.

This MIB module is restricted to reading standard PTP data elements, as described in [IEEE-1588-2008]. This enables it to monitor the operation of PTP clocks within the network. It is envisioned that this MIB module will complement other managed objects to be defined that will provide more detailed information on the performance of PTP clocks supporting the Telecom Profile defined in [G.8265.1] and any future profiles that may be defined. Those objects are considered out of scope for the current document.

Similarly, this MIB module is read-only and not intended to provide the ability to configure PTP clocks. Since PTP clocks are often embedded in other network elements such as routers, switches, and gateways, this ability is generally provided via the configuration interface for the network element.

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "NOT RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in BCP 14 [RFC2119] [RFC8174] when, and only when, they appear in all capitals, as shown here.

1.1. Relationship to Other Profiles and MIBs

This MIB module is intended to be used with the default PTP profile described in [IEEE-1588-2008] when running over the IP network layer. As stated above, it is envisioned that this MIB module will complement other managed objects to be defined to monitor and measure the performance of PTP clocks supporting specific PTP profiles, e.g., the Telecom Profile defined in [G.8265.1].

Some other PTP profiles have their own MIB modules defined as part of the profile, and this MIB module is not intended to replace those MIB modules.

2. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to section 7 of RFC 3410 [RFC3410].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, RFC 2578 [RFC2578], STD 58, RFC 2579 [RFC2579] and STD 58, RFC 2580 [RFC2580].

3. Overview

The objects defined in this MIB module are to be used when describing the Precision Time Protocol (PTP), as defined in [IEEE-1588-2008].

Section 6 of [IEEE-1588-2008] provides an overview of synchronization networks using PTP.

Terms used in this document have meanings as defined in Section 3.1 of [IEEE-1588-2008].

4. PTP MIB Definition

```
PTPBASE-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
    MODULE-IDENTITY,
    OBJECT-TYPE,
    OBJECT-IDENTITY,
    Gauge32,
    Unsigned32,
    Counter32,
    Counter64,
    mib-2,
    Integer32
        FROM SNMPv2-SMI
    OBJECT-GROUP,
    MODULE-COMPLIANCE
        FROM SNMPv2-CONF
    TEXTUAL-CONVENTION,
    TruthValue,
    DisplayString,
    AutonomousType
        FROM SNMPv2-TC
    InterfaceIndexOrZero
        FROM IF-MIB;
```

```
ptpbasesMIB MODULE-IDENTITY
```

```
    LAST-UPDATED      "201705300000Z"
    ORGANIZATION      "TICTOC Working Group"
    CONTACT-INFO
        "WG Email: tictoc@ietf.org

        Vinay Shankarkumar
        Cisco Systems
        Email: vinays@cisco.com

        Laurent Montini
        Cisco Systems
        Email: lmontini@cisco.com

        Tim Frost
        Calnex Solutions Ltd.
        Email: tim.frost@calnexsol.com

        Greg Dowd
        Microsemi Inc.
        Email: greg.dowd@microsemi.com"
```

DESCRIPTION

"The MIB module for PTP version 2

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Overview of PTP version 2 (IEEE Std. 1588-2008)

[IEEE-1588-2008] defines a protocol enabling precise synchronization of clocks in measurement and control systems implemented with packet-based networks, the Precision Time Protocol version 2 (PTPv2). This MIB module does not address PTPv1, the earlier version defined in IEEE Std. 1588-2002. The protocol is applicable to network elements communicating using IP. The protocol enables heterogeneous systems that include clocks of various inherent precision, resolution, and stability to synchronize to a grandmaster clock.

The protocol supports system-wide synchronization accuracy in the sub-microsecond range with minimal network and local clock computing resources. [IEEE-1588-2008] uses UDP/IP or Ethernet and can be adapted to other mappings. It includes formal mechanisms for message extensions, higher sampling rates, correction for asymmetry, a clock type to reduce error accumulation in large topologies, and specifications on how to incorporate the resulting additional data into the synchronization protocol. [IEEE-1588-2008] also defines conformance and management capability.

MIB description

This MIB module supports the Precision Time Protocol version 2 (PTPv2, hereafter designated as PTP) features of network element system devices, when using the default PTP profile described in [IEEE-1588-2008] when running over the IP network layer.

It is envisioned that this MIB module will complement other managed objects to be defined to monitor and measure the performance of the PTP devices and telecom clocks supporting specific PTP profiles.

Some other PTP profiles have their own MIB modules defined as part of the profile, and this MIB module is not intended to replace those MIB modules.

Technical terms used in this module are defined in [IEEE-1588-2008].

The MIB module refers to sections of [IEEE-1588-2008].

Abbreviations:

E2E	End-to-End
EUI	Extended Unique Identifier
GPS	Global Positioning System
IANA	Internet Assigned Numbers Authority
IP	Internet Protocol
NTP	Network Time Protocol (see [RFC5905])
P2P	Peer-to-Peer
PTP	Precision Time Protocol
TAI	International Atomic Time
UDP	User Datagram Protocol
UTC	Coordinated Universal Time

References:

[IEEE-1588-2008] IEEE Standard for A Precision Clock Synchronization Protocol for Networked Measurement and Control Systems, IEEE Std. 1588-2008, July 2008.

The below table specifies the object formats of the various textual conventions used.

Data type mapping	Textual Convention	SYNTAX
5.3.2 TimeInterval	PtpClockTimeInterval	OCTET STRING(SIZE(1..255))
5.3.3 Timestamp	PtpClockTimestamp	OCTET STRING(SIZE(6))
5.3.4 ClockIdentity	PtpClockIdentity	OCTET STRING(SIZE(8))
5.3.5 PortIdentity	PtpClockPortNumber	INTEGER(1..65535)
5.3.7 ClockQuality	PtpClockQualityClassType	

"

REVISION "201705300000Z"
 DESCRIPTION "Initial version of this MIB module, published as RFC 8173."

::= { mib-2 241 }

-- Textual Conventions

PtpClockDomainType ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"The Domain is identified by an integer, the domainNumber, in the range of 0 to 255. An integer value that is used to assign each PTP device to a particular domain."

REFERENCE "Section 7.1 ('Domains') and Table 2 ('domainNumber') of [IEEE-1588-2008]"

SYNTAX Unsigned32 (0..255)

PtpClockIdentity ::= TEXTUAL-CONVENTION

DISPLAY-HINT "255a"

STATUS current

DESCRIPTION

"The clock identity is an 8-octet array and will be presented in the form of a character array. Network byte order is assumed.

The value of the PtpClockIdentity should be taken from the IEEE EUI-64 individual assigned numbers as indicated in Section 7.5.2.2.2 of [IEEE-1588-2008]. It can also be a non-EUI-64 address as defined in Section 7.5.2.2.3 of [IEEE-1588-2008].

The clock identifier can be constructed from existing EUI-48 assignments."

REFERENCE "Section 7.5.2.2.1 ('General') of [IEEE-1588-2008]"

SYNTAX OCTET STRING (SIZE (8))

PtpClockInstanceType ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"The instance of the clock of a given clock type in a given domain."

SYNTAX Unsigned32 (0..255)

PtpClockIntervalBase2 ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"The interval included in message types Announce, Sync, Delay_Req, and Pdelay_Req as indicated in Section 7.7.2.1 of [IEEE-1588-2008]."

REFERENCE "Section 7.7.2.1 ('General interval specification') of [IEEE-1588-2008]"
 SYNTAX Integer32 (-128..127)

PtpClockMechanismType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The clock type based on whether end-to-end or peer-to-peer mechanisms are used. The mechanism used to calculate the Mean Path Delay as indicated in Table 9 of [IEEE-1588-2008]."

REFERENCE

"Sections 8.2.5.4.4 ('portDS.delayMechanism'), 6.6.4 ('Measuring link propagation delay in clocks supporting peer-to-peer path correction'), and 7.4.2 ('communication Path asymmetry') of [IEEE-1588-2008]."

SYNTAX INTEGER {
 e2e(1),
 p2p(2),
 disabled(254)
 }

PtpClockPortNumber ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"An index identifying a specific PTP port on a PTP node."

REFERENCE

"Sections 7.5.2.3 ('portNumber') and 5.3.5 ('PortIdentity') of [IEEE-1588-2008]"

SYNTAX Unsigned32 (0..65535)

PtpClockPortState ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"This is the value of the current state of the protocol engine associated with this port."

REFERENCE

"Sections 8.2.5.3.1 ('portState') and 9.2.5 ('State machines') of [IEEE-1588-2008]"

SYNTAX INTEGER {
 initializing(1),
 faulty(2),
 disabled(3),
 listening(4),
 preMaster(5),

```

        master(6),
        passive(7),
        uncalibrated(8),
        slave(9)
    }

```

PtpClockPortTransportTypeAddress ::= TEXTUAL-CONVENTION

DISPLAY-HINT "255a"

STATUS current

DESCRIPTION

"The clock port transport protocol address used for this communication between the clock nodes. This is a string corresponding to the address type as specified by the transport type used. The transport types can be defined elsewhere, in addition to the ones defined in this document. This can be an address of type IP version 4, IP version 6, Ethernet, DeviceNET, ControlNET, or IEC61158. The OCTET STRING representation of the OID of ptpbaseWellKnownTransportTypes will be used in the values contained in the OCTET STRING."

REFERENCE "Annex D (IPv4), Annex E (IPv6), Annex F (Ethernet), Annex G (DeviceNET), Annex H (ControlNET), and Annex I (IEC61158) of [IEEE-1588-2008]"

SYNTAX OCTET STRING (SIZE (1..255))

PtpClockProfileType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Clock Profile used. A profile is the set of allowed PTP features applicable to a device."

REFERENCE "Sections 3.1.30 ('profile') and 19.3 ('PTP profiles') of [IEEE-1588-2008]"

SYNTAX INTEGER {
 default(1),
 telecom(2),
 vendorspecific(3)
 }

PtpClockQualityAccuracyType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The ClockQuality as specified in Section 5.3.7, Section 7.6.2.5, and Table 6 of [IEEE-1588-2008].

The following values are not represented in the enumerated values.

0x01-0x1F Reserved
 0x32-0x7F Reserved

It is important to note that Section 7.1.1 of RFC 2578 allows for gaps and for enumerated values to start at zero when indicated by the protocol."

REFERENCE

"Section 5.3.7 ('ClockQuality'), Section 7.6.2.5 ('clockAccuracy'), and Table 6 ('clockAccuracy enumeration') of [IEEE-1588-2008]"

SYNTAX INTEGER {
 -- reserved00(0:31), 0x00 to 0x1F
 nanoSecond25(32), -- 0x20
 nanoSecond100(33), -- 0x21
 nanoSecond250(34), -- 0x22
 microSec1(35), -- 0x23
 microSec2dot5(36), -- 0x24
 microSec10(37), -- 0x25
 microSec25(38), -- 0x26
 microSec100(39), -- 0x27
 microSec250(40), -- 0x28
 milliSec1(41), -- 0x29
 milliSec2dot5(42), -- 0x2A
 milliSec10(43), -- 0x2B
 milliSec25(44), -- 0x2C
 milliSec100(45), -- 0x2D
 milliSec250(46), -- 0x2E
 second1(47), -- 0x2F
 second10(48), -- 0x30
 secondGreater10(49), -- 0x31
 unknown(254) -- 0xFE
 -- reserved255(255), 0xFF
 }

PtpClockQualityClassType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The ClockQuality as specified in Section 5.3.7, Section 7.6.2.4, and Table 5 of [IEEE-1588-2008]."

REFERENCE "Section 5.3.7 ('ClockQuality'), Section 7.6.2.4 ('clockClass'), and Table 5 ('clockClass specifications') of [IEEE-1588-2008]."

SYNTAX INTEGER {
 -- reserved(0), 0x00
 -- reserved(1:5), 0x01 to 0x05
 clockclass6(6), -- 0x06

```

        clockclass7(7), -- 0x07
        -- reserved(8), 0x08
        -- reserved(9:10), 0x09 to 0x0A
        -- reserved(11:12), 0x0B, 0x0C
        clockclass13(13), -- 0x0D
        clockclass14(14), -- 0x0E
        -- reserved(15:51), 0x0F to 0x33
        clockclass52(52), -- 0x34
        -- reserved(53:57), 0x35 to 0x39
        clockclass58(58) -- 0x3A
        -- reserved(59:67), 0x3B to 0x43
        -- otherprofiles(68:122), 0x44 to 0x7A
        -- reserved(123:127), 0x7B to 0x7F
        -- reserved(128:132), 0x80 to 0x84
    }

```

PtpClockRoleType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The Clock Role. The protocol generates a master-slave relationship among the clocks in the system.

Clock Role	Value
Master clock	1
Slave clock	2 "

SYNTAX INTEGER {
 master(1),
 slave(2)
 }

PtpClockStateType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The clock state returned by a PTP engine.

Clock State	Value
Freerun state	1
Holdover state	2
Acquiring state	3
Freq_locked state	4
Phase_aligned state	5 "

SYNTAX INTEGER {
 freerun(1),
 holdover(2),
 acquiring(3),
 frequencyLocked(4),
 }

```

        phaseAligned(5)
    }

```

PtpClockTimeInterval ::= TEXTUAL-CONVENTION

DISPLAY-HINT "255a"

STATUS current

DESCRIPTION

"This textual convention corresponds to the TimeInterval structure indicated in Section 5.3.2 of [IEEE-1588-2008]. It will be presented in the form of a character array. Network byte order is assumed."

REFERENCE

"Sections 5.3.2 ('TimeInterval') and 7.7.2.1 ('Timer interval specification') of [IEEE-1588-2008]"

SYNTAX OCTET STRING (SIZE (1..255))

PtpClockTimeSourceType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The ClockQuality as specified in Sections 5.3.7, Section 7.6.2.6, and Table 7 of [IEEE-1588-2008].

The following values are not represented in the enumerated values.

0xF0-0xFE For use by alternate PTP profiles

0xFF Reserved

It is important to note that Section 7.1.1 of RFC 2578 allows for gaps and for enumerated values to start at zero when indicated by the protocol."

REFERENCE "Section 5.3.7 ('ClockQuality'), Section 7.6.2.6 ('timeSource'), and Table 7 ('timeSource enumeration') of [IEEE-1588-2008]."

SYNTAX INTEGER {
 atomicClock(16), -- 0x10
 gps(32), -- 0x20
 terrestrialRadio(48), -- 0x22
 ptp(64), -- 0x40
 ntp(80), -- 0x50
 handSet(96), -- 0x60
 other(144), -- 0x90
 internalOscillator(160) -- 0xA0
}

PtpClockTxModeType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"Transmission mode.

Unicast: Using unicast communication channel.

Multicast: Using Multicast communication channel.

multicast-mix: Using multicast-unicast communication channel"

SYNTAX INTEGER {
unicast(1),
multicast(2),
multicastmix(3)
}

PtpClockType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"The clock types as defined in the MIB module description."

REFERENCE

"Section 6.5.1 ('PTP device types') of [IEEE-1588-2008]."

SYNTAX INTEGER {
ordinaryClock(1),
boundaryClock(2),
transparentClock(3),
boundaryNode(4)
}

ptpbaseMIBNotifs OBJECT IDENTIFIER

::= { ptpbaseMIB 0 }

ptpbaseMIBObjects OBJECT IDENTIFIER

::= { ptpbaseMIB 1 }

ptpbaseMIBConformance OBJECT IDENTIFIER

::= { ptpbaseMIB 2 }

ptpbaseMIBSystemInfo OBJECT IDENTIFIER

::= { ptpbaseMIBObjects 1 }

ptpbaseMIBClockInfo OBJECT IDENTIFIER

::= { ptpbaseMIBObjects 2 }

```

ptpbasesystemTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbaseSystemEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of count information about the PTP system for all
        domains."
    ::= { ptpbaseMIBSystemInfo 1 }

ptpbasesystemEntry OBJECT-TYPE
    SYNTAX          PtpbaseSystemEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains count information about a
        single domain.  New row entries are added when the PTP clock for
        this domain is configured, while the unconfiguration of the PTP
        clock removes them."
    INDEX           {
                    ptpDomainIndex,
                    ptpInstanceIndex
                  }
    ::= { ptpbaseSystemTable 1 }

PtpbaseSystemEntry ::= SEQUENCE {
    ptpDomainIndex      PtpClockDomainType,
    ptpInstanceIndex   PtpClockInstanceType,
    ptpDomainClockPortsTotal Gauge32
}

ptpDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices.  The Clock Domain is a logical
        group of clocks and devices that synchronize with each other
        using the PTP protocol."

    0                Default domain
    1                Alternate domain 1
    2                Alternate domain 2
    3                Alternate domain 3
    4 - 127          User-defined domains
    128 - 255        Reserved"
    ::= { ptpbaseSystemEntry 1 }

```

```

ptpInstanceIndex OBJECT-TYPE
    SYNTAX          PtpClockInstanceType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the instance of the clock for this
        domain."
    ::= { ptpbaseSystemEntry 2 }

ptpDomainClockPortsTotal OBJECT-TYPE
    SYNTAX          Gauge32
    UNITS           "ptp ports"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the total number of clock ports
        configured within a domain in the system."
    ::= { ptpbaseSystemEntry 3 }

ptpbaseSystemDomainTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbaseSystemDomainEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about the PTP system for all clock modes
        -- ordinary, boundary, or transparent."
    ::= { ptpbaseMIBSystemInfo 2 }

ptpbaseSystemDomainEntry OBJECT-TYPE
    SYNTAX          PtpbaseSystemDomainEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        clock mode for the PTP system. A row entry gets added when PTP
        clocks are configured on the node."
    INDEX          { ptpbaseSystemDomainClockTypeIndex }
    ::= { ptpbaseSystemDomainTable 1 }

PtpbaseSystemDomainEntry ::= SEQUENCE {
    ptpbaseSystemDomainClockTypeIndex PtpClockType,
    ptpbaseSystemDomainTotals         Unsigned32
}

```



```

ptpbasesystemDomainClockTypeIndex OBJECT-TYPE
    SYNTAX          PtpClockType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the clock type as defined in the
        textual convention description."
    ::= { ptpbaseSystemDomainEntry 1 }

ptpbasesystemDomainTotals OBJECT-TYPE
    SYNTAX          Unsigned32
    UNITS           "domains"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the total number of PTP domains for this
        particular clock type configured in this node."
    ::= { ptpbaseSystemDomainEntry 2 }

ptpbasesystemProfile OBJECT-TYPE
    SYNTAX          PtpClockProfileType
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the PTP profile implemented on the
        system."
    REFERENCE       "Section 19.3 ('PTP profiles')
                    of [IEEE-1588-2008]"
    ::= { ptpbaseMIBSystemInfo 3 }

ptpbasesystemClockCurrentDSTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbaseClockCurrentDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about the PTP clock currentDS for
        all domains."
    ::= { ptpbaseMIBClockInfo 1 }

ptpbasesystemClockCurrentDSEntry OBJECT-TYPE
    SYNTAX          PtpbaseClockCurrentDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        PTP clock currentDS for a domain."
    REFERENCE       "Section 8.2.2 ('currentDS data set member

```

```

specifications') of [IEEE-1588-2008]"
INDEX      {
            ptpbaseClockCurrentDSDomainIndex,
            ptpbaseClockCurrentDSClockTypeIndex,
            ptpbaseClockCurrentDSInstanceIndex
          }
 ::= { ptpbaseClockCurrentDSTable 1 }

PtpbaseClockCurrentDSEntry ::= SEQUENCE {
    ptpbaseClockCurrentDSDomainIndex      PtpClockDomainType,
    ptpbaseClockCurrentDSClockTypeIndex   PtpClockType,
    ptpbaseClockCurrentDSInstanceIndex    PtpClockInstanceType,
    ptpbaseClockCurrentDSStepsRemoved     Unsigned32,
    ptpbaseClockCurrentDSOffsetFromMaster PtpClockTimeInterval,
    ptpbaseClockCurrentDSMeanPathDelay    PtpClockTimeInterval
}

ptpbaseClockCurrentDSDomainIndex OBJECT-TYPE
SYNTAX      PtpClockDomainType
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object specifies the domain number used to create a
    logical group of PTP devices."
 ::= { ptpbaseClockCurrentDSEntry 1 }

ptpbaseClockCurrentDSClockTypeIndex OBJECT-TYPE
SYNTAX      PtpClockType
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object specifies the clock type as defined in the
    textual convention description."
 ::= { ptpbaseClockCurrentDSEntry 2 }

ptpbaseClockCurrentDSInstanceIndex OBJECT-TYPE
SYNTAX      PtpClockInstanceType
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "This object specifies the instance of the clock for this clock
    type in the given domain."
 ::= { ptpbaseClockCurrentDSEntry 3 }

```

ptpbasedClockCurrentDSStepsRemoved OBJECT-TYPE

SYNTAX Unsigned32

UNITS "Steps"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The current clock dataset stepsRemoved value.

This object specifies the distance measured by the number of boundary clocks between the local clock and the foreign master as indicated in the stepsRemoved field of Announce messages."

REFERENCE

"Section 8.2.2.2 ('stepsRemoved') of [IEEE-1588-2008]"

::= { ptpbasedClockCurrentDSEntry 4 }

ptpbasedClockCurrentDSOffsetFromMaster OBJECT-TYPE

SYNTAX PtpClockTimeInterval

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the current clock dataset ClockOffset value. The value of the computation of the offset in time between a slave and a master clock."

REFERENCE

"Section 8.2.2.3 ('currentDS.offsetFromMaster') of [IEEE-1588-2008]"

::= { ptpbasedClockCurrentDSEntry 5 }

ptpbasedClockCurrentDSMeanPathDelay OBJECT-TYPE

SYNTAX PtpClockTimeInterval

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the current clock dataset MeanPathDelay value.

The mean path delay between a pair of ports as measured by the delay request-response mechanism."

REFERENCE

"Section 8.2.2.4 ('currentDS.meanPathDelay') of [IEEE-1588-2008]"

::= { ptpbasedClockCurrentDSEntry 6 }

```

ptpbasedClockParentDSTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbasedClockParentDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about the PTP clock parentDS for
        all domains."
    ::= { ptpbaseMIBClockInfo 2 }

ptpbasedClockParentDSEntry OBJECT-TYPE
    SYNTAX          PtpbasedClockParentDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        PTP clock parentDS for a domain."
    REFERENCE
        "Section 8.2.3 ('parentDS data set member specifications') of
        [IEEE-1588-2008]"
    INDEX
        {
            ptpbasedClockParentDSDomainIndex,
            ptpbasedClockParentDSClockTypeIndex,
            ptpbasedClockParentDSInstanceIndex
        }
    ::= { ptpbasedClockParentDSTable 1 }

PtpbasedClockParentDSEntry ::= SEQUENCE {
    ptpbasedClockParentDSDomainIndex      PtpClockDomainType,
    ptpbasedClockParentDSClockTypeIndex   PtpClockType,
    ptpbasedClockParentDSInstanceIndex    PtpClockInstanceType,
    ptpbasedClockParentDSParentPortIdentity OCTET STRING,
    ptpbasedClockParentDSParentStats      TruthValue,
    ptpbasedClockParentDSOffset           PtpClockIntervalBase2,
    ptpbasedClockParentDSClockPhChRate    Integer32,
    ptpbasedClockParentDSGMClockIdentity   PtpClockIdentity,
    ptpbasedClockParentDSGMClockPriority1  Unsigned32,
    ptpbasedClockParentDSGMClockPriority2  Unsigned32,
    ptpbasedClockParentDSGMClockQualityClass PtpClockQualityClassType,
    ptpbasedClockParentDSGMClockQualityAccuracy
    PtpClockQualityAccuracyType,
    ptpbasedClockParentDSGMClockQualityOffset Unsigned32
}

```

```

ptpbasedClockParentDSDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbasedClockParentDSEntry 1 }

ptpbasedClockParentDSClockTypeIndex OBJECT-TYPE
    SYNTAX          PtpClockType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the clock type as defined in the
        textual convention description."
    ::= { ptpbasedClockParentDSEntry 2 }

ptpbasedClockParentDSInstanceIndex OBJECT-TYPE
    SYNTAX          PtpClockInstanceType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the instance of the clock for this clock
        type in the given domain."
    ::= { ptpbasedClockParentDSEntry 3 }

ptpbasedClockParentDSParentPortIdentity OBJECT-TYPE
    SYNTAX          OCTET STRING(SIZE(1..256))
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the value of portIdentity of the port on
        the master that issues the Sync messages used in synchronizing
        this clock."
    REFERENCE
        "Section 8.2.3.2 ('parentDS.parentPortIdentity') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 4 }

```

ptpbaseClockParentDSParentStats OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the parentDS ParentStats value.

This value indicates whether the values of ParentDSOffset and ParentDSClockPhChRate have been measured and are valid. A TRUE value shall indicate valid data."

REFERENCE

"Section 8.2.3.3 ('parentDS.parentStats') of [IEEE-1588-2008]"

::= { ptpbaseClockParentDSEntry 5 }

ptpbaseClockParentDSOffset OBJECT-TYPE

SYNTAX PtpClockIntervalBase2 (-128..127)

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the parentDS ParentOffsetScaledLogVariance value.

This value is the variance of the parent clock's phase as measured by the local clock."

REFERENCE

"Section 8.2.3.4

('parentDS.observedParentOffsetScaledLogVariance') of [IEEE-1588-2008]"

::= { ptpbaseClockParentDSEntry 6 }

ptpbaseClockParentDSClockPhChRate OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the clock's parentDS ParentClockPhaseChangeRate value.

This value is an estimate of the parent clock's phase change rate as measured by the slave clock."

REFERENCE

"Section 8.2.3.5

('parentDS.observedParentClockPhaseChangeRate') of [IEEE-1588-2008]"

::= { ptpbaseClockParentDSEntry 7 }

```

ptpbasedClockParentDSGMClockIdentity OBJECT-TYPE
    SYNTAX          PtpClockIdentity
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        identity."
    REFERENCE
        "Section 8.2.3.6 ('parentDS.grandmasterIdentity') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 8 }

ptpbasedClockParentDSGMClockPriority1 OBJECT-TYPE
    SYNTAX          Unsigned32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        priority1."
    REFERENCE
        "Section 8.2.3.8 ('parentDS.grandmasterPriority1') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 9 }

ptpbasedClockParentDSGMClockPriority2 OBJECT-TYPE
    SYNTAX          Unsigned32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        priority2."
    REFERENCE
        "Section 8.2.3.9 ('parentDS.grandmasterPriority2') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 10 }

ptpbasedClockParentDSGMClockQualityClass OBJECT-TYPE
    SYNTAX          PtpClockQualityClassType
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        quality class."
    REFERENCE
        "Section 8.2.3.7 ('parentDS.grandmasterClockQuality') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 11 }

```

```
ptpbasedClockParentDSGMClockQualityAccuracy OBJECT-TYPE
    SYNTAX          PtpClockQualityAccuracyType
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        quality accuracy."
    REFERENCE
        "Section 8.2.3.7 ('parentDS.grandmasterClockQuality') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 12 }
```

```
ptpbasedClockParentDSGMClockQualityOffset OBJECT-TYPE
    SYNTAX          Unsigned32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the parentDS grandmaster clock
        quality offset."
    REFERENCE
        "Section 8.2.3.7 ('parentDS.grandmasterClockQuality') of
        [IEEE-1588-2008]"
    ::= { ptpbasedClockParentDSEntry 13 }
```

```
ptpbasedClockDefaultDSTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbasedClockDefaultDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about the PTP clock defaultDS for
        all domains."
    ::= { ptpbasedMIBClockInfo 3 }
```

```
ptpbasedClockDefaultDSEntry OBJECT-TYPE
    SYNTAX          PtpbasedClockDefaultDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        PTP clock defaultDS for a domain."
    INDEX
        {
            ptpbasedClockDefaultDSDomainIndex,
            ptpbasedClockDefaultDSClockTypeIndex,
            ptpbasedClockDefaultDSInstanceIndex
        }
    ::= { ptpbasedClockDefaultDSTable 1 }
```

```
PtpbasedClockDefaultDSEntry ::= SEQUENCE {
```



```

    ptpbaseClockDefaultDSDomainIndex      PtpClockDomainType,
    ptpbaseClockDefaultDSClockTypeIndex   PtpClockType,
    ptpbaseClockDefaultDSInstanceIndex    PtpClockInstanceType,
    ptpbaseClockDefaultDSTwoStepFlag     TruthValue,
    ptpbaseClockDefaultDSClockIdentity    PtpClockIdentity,
    ptpbaseClockDefaultDSPriority1       Unsigned32,
    ptpbaseClockDefaultDSPriority2       Unsigned32,
    ptpbaseClockDefaultDSSlaveOnly       TruthValue,
    ptpbaseClockDefaultDSQualityClass     PtpClockQualityClassType,
    ptpbaseClockDefaultDSQualityAccuracy PtpClockQualityAccuracyType,
    ptpbaseClockDefaultDSQualityOffset    Integer32
}

```

```

ptpbaseClockDefaultDSDomainIndex OBJECT-TYPE
    SYNTAX      PtpClockDomainType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbaseClockDefaultDSEntry 1 }

```

```

ptpbaseClockDefaultDSClockTypeIndex OBJECT-TYPE
    SYNTAX      PtpClockType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object specifies the clock type as defined in the
        textual convention description."
    ::= { ptpbaseClockDefaultDSEntry 2 }

```

```

ptpbaseClockDefaultDSInstanceIndex OBJECT-TYPE
    SYNTAX      PtpClockInstanceType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object specifies the instance of the clock for this clock
        type in the given domain."
    ::= { ptpbaseClockDefaultDSEntry 3 }

```

```

ptpbaseClockDefaultDSTwoStepFlag OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies whether the two-step process is used."
    ::= { ptpbaseClockDefaultDSEntry 4 }

```

```
ptpbasedefaultDSClockIdentity OBJECT-TYPE
    SYNTAX      PtpClockIdentity
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS clockIdentity member."
    ::= { ptpbasedefaultDSEntry 5 }

ptpbasedefaultDSPriority1 OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS priority1 member."
    ::= { ptpbasedefaultDSEntry 6 }

ptpbasedefaultDSPriority2 OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS priority2 member."
    ::= { ptpbasedefaultDSEntry 7 }

ptpbasedefaultDSSlaveOnly OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies whether the SlaveOnly flag is set."
    ::= { ptpbasedefaultDSEntry 8 }

ptpbasedefaultDSQualityClass OBJECT-TYPE
    SYNTAX      PtpClockQualityClassType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS Quality Class."
    ::= { ptpbasedefaultDSEntry 9 }

ptpbasedefaultDSQualityAccuracy OBJECT-TYPE
    SYNTAX      PtpClockQualityAccuracyType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS Quality Accuracy."
    ::= { ptpbasedefaultDSEntry 10 }
```

```

ptpbasedefaultDSQualityOffset OBJECT-TYPE
    SYNTAX      Integer32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "This object specifies the defaultDS Quality offset."
    ::= { ptpbasedefaultDSEntry 11 }

ptpbasedefaultDSQualityOffsetTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF PtpbasedefaultDSQualityOffsetEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "Table of information about the PTP clock running datasets for
        all domains."
    ::= { ptpbaseMIBClockInfo 4 }

ptpbasedefaultDSQualityOffsetEntry OBJECT-TYPE
    SYNTAX      PtpbasedefaultDSQualityOffsetEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table entry that contains information about a single
        PTP clock running dataset for a domain."
    INDEX      {
                ptpbasedefaultDSQualityOffsetDomainIndex,
                ptpbasedefaultDSQualityOffsetClockTypeIndex,
                ptpbasedefaultDSQualityOffsetInstanceIndex
            }
    ::= { ptpbasedefaultDSQualityOffsetTable 1 }

PtpbasedefaultDSQualityOffsetEntry ::= SEQUENCE {
    ptpbasedefaultDSQualityOffsetDomainIndex      PtpClockDomainType,
    ptpbasedefaultDSQualityOffsetClockTypeIndex   PtpClockType,
    ptpbasedefaultDSQualityOffsetInstanceIndex    PtpClockInstanceType,
    ptpbasedefaultDSQualityOffsetState            PtpClockStateType,
    ptpbasedefaultDSQualityOffsetPacketsSent      Counter64,
    ptpbasedefaultDSQualityOffsetPacketsReceived Counter64
}

```

ptpbasedClockRunningDomainIndex OBJECT-TYPE

SYNTAX PtpClockDomainType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the domain number used to create a logical group of PTP devices."

::= { ptpbasedClockRunningEntry 1 }

ptpbasedClockRunningClockTypeIndex OBJECT-TYPE

SYNTAX PtpClockType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the clock type as defined in the textual convention description."

::= { ptpbasedClockRunningEntry 2 }

ptpbasedClockRunningInstanceIndex OBJECT-TYPE

SYNTAX PtpClockInstanceType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the instance of the clock for this clock type in the given domain."

::= { ptpbasedClockRunningEntry 3 }

ptpbasedClockRunningState OBJECT-TYPE

SYNTAX PtpClockStateType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the clock state returned by a PTP engine."

::= { ptpbasedClockRunningEntry 4 }

ptpbasedClockRunningPacketsSent OBJECT-TYPE

SYNTAX Counter64

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the total number of all unicast and multicast packets that have been sent out for this clock in this domain for this type. These counters are discontinuous."

::= { ptpbasedClockRunningEntry 5 }

ptpbasedClockRunningPacketsReceived OBJECT-TYPE

SYNTAX Counter64
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies the total number of all unicast and multicast packets that have been received for this clock in this domain for this type. These counters are discontinuous."

::= { ptpbasedClockRunningEntry 6 }

ptpbasedClockTimePropertiesDSTable OBJECT-TYPE

SYNTAX SEQUENCE OF PtpbasedClockTimePropertiesDSEntry
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"Table of information about the PTP clock timePropertiesDS for all domains."

::= { ptpbasedMIBClockInfo 5 }

ptpbasedClockTimePropertiesDSEntry OBJECT-TYPE

SYNTAX PtpbasedClockTimePropertiesDSEntry
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"A table entry that contains information about a single PTP clock timePropertiesDS for a domain."

REFERENCE

"Section 8.2.4 ('timePropertiesDS data set member specifications') of [IEEE-1588-2008]"

INDEX {
 ptpbasedClockTimePropertiesDSDomainIndex,
 ptpbasedClockTimePropertiesDSClockTypeIndex,
 ptpbasedClockTimePropertiesDSInstanceIndex
 }

::= { ptpbasedClockTimePropertiesDSTable 1 }

PtpbasedClockTimePropertiesDSEntry ::= SEQUENCE {

ptpbasedClockTimePropertiesDSDomainIndex	PtpClockDomainType,
ptpbasedClockTimePropertiesDSClockTypeIndex	PtpClockType,
ptpbasedClockTimePropertiesDSInstanceIndex	
PtpClockInstanceType,	
ptpbasedClockTimePropertiesDSCurrentUTCOffsetValid	TruthValue,
ptpbasedClockTimePropertiesDSCurrentUTCOffset	Integer32,
ptpbasedClockTimePropertiesDSLeap59	TruthValue,
ptpbasedClockTimePropertiesDSLeap61	TruthValue,
ptpbasedClockTimePropertiesDSTimeTraceable	TruthValue,
ptpbasedClockTimePropertiesDSFreqTraceable	TruthValue,
ptpbasedClockTimePropertiesDSPTPTimescale	TruthValue,

```

    ptpbaseClockTimePropertiesDSSource
    PtpClockTimeSourceType
}

```

```

ptpbaseClockTimePropertiesDSDomainIndex OBJECT-TYPE

```

```

    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbaseClockTimePropertiesDSEntry 1 }

```

```

ptpbaseClockTimePropertiesDSClockTypeIndex OBJECT-TYPE

```

```

    SYNTAX          PtpClockType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the clock type as defined in the
        textual convention description."
    ::= { ptpbaseClockTimePropertiesDSEntry 2 }

```

```

ptpbaseClockTimePropertiesDSInstanceIndex OBJECT-TYPE

```

```

    SYNTAX          PtpClockInstanceType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the instance of the clock for this clock
        type in the given domain."
    ::= { ptpbaseClockTimePropertiesDSEntry 3 }

```

```

ptpbaseClockTimePropertiesDSCurrentUTCOffsetValid OBJECT-TYPE

```

```

    SYNTAX          TruthValue
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the timePropertiesDS value of
        whether the current UTC offset is valid."
    REFERENCE
        "Section 8.2.4.2 ('timePropertiesDS.currentUtcOffset') of
        [IEEE-1588-2008]"
    ::= { ptpbaseClockTimePropertiesDSEntry 4 }

```

```

ptpbaseClockTimePropertiesDSCurrentUTCOffset OBJECT-TYPE

```

```

    SYNTAX          Integer32
    MAX-ACCESS      read-only
    STATUS          current

```

DESCRIPTION

"This object specifies the timePropertiesDS value of the current UTC offset.

In PTP systems whose epoch is the PTP epoch, the value of timePropertiesDS.currentUtcOffset is the offset between TAI and UTC; otherwise, the value has no meaning. The value shall be in units of seconds."

REFERENCE

"Section 8.2.4.3 ('timePropertiesDS.currentUtcOffsetValid') of [IEEE-1588-2008]"

::= { ptpbaseClockTimePropertiesDSEntry 5 }

ptpbaseClockTimePropertiesDSLeap59 OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Leap59 value in the clock currentDS."

REFERENCE

"Section 8.2.4.4 ('timePropertiesDS.leap59') of [IEEE-1588-2008]"

::= { ptpbaseClockTimePropertiesDSEntry 6 }

ptpbaseClockTimePropertiesDSLeap61 OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Leap61 value in the clock currentDS."

REFERENCE

"Section 8.2.4.5 ('timePropertiesDS.leap61') of [IEEE-1588-2008]"

::= { ptpbaseClockTimePropertiesDSEntry 7 }

ptpbaseClockTimePropertiesDSTimeTraceable OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Time Traceable value in the clock currentDS."

REFERENCE

"Section 8.2.4.6 ('timePropertiesDS.timeTraceable') of [IEEE-1588-2008]"

::= { ptpbaseClockTimePropertiesDSEntry 8 }

ptpbasesClockTimePropertiesDSFreqTraceable OBJECT-TYPE

SYNTAX TruthValue
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies the Frequency Traceable value in the clock currentDS."

REFERENCE

"Section 8.2.4.7 ('timePropertiesDS.frequencyTraceable') of [IEEE-1588-2008]"

::= { ptpbasesClockTimePropertiesDSEntry 9 }

ptpbasesClockTimePropertiesDSPTPTimescale OBJECT-TYPE

SYNTAX TruthValue
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies the PTP Timescale value in the clock currentDS."

REFERENCE

"Section 8.2.4.8 ('timePropertiesDS.ptpTimescale') of [IEEE-1588-2008]"

::= { ptpbasesClockTimePropertiesDSEntry 10 }

ptpbasesClockTimePropertiesDSSource OBJECT-TYPE

SYNTAX PtpClockTimeSourceType
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies the Timesource value in the clock currentDS."

REFERENCE

"Section 8.2.4.9 ('timePropertiesDS.timeSource') of [IEEE-1588-2008]"

::= { ptpbasesClockTimePropertiesDSEntry 11 }

ptpbasesClockTransDefaultDSTable OBJECT-TYPE

SYNTAX SEQUENCE OF PtpbasesClockTransDefaultDSEntry
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"Table of information about the PTP transparentClockDefaultDS for all domains."

::= { ptpbasesMIBClockInfo 6 }


```

ptpbasedClockTransDefaultDSEntry OBJECT-TYPE
    SYNTAX          PtpbasedClockTransDefaultDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        PTP transparent clock defaultDS for a domain."
    REFERENCE
        "Section 8.3.2 ('transparentClockDefaultDS data set member
        specifications') of [IEEE-1588-2008]"
    INDEX           {
                    ptpbasedClockTransDefaultDSDomainIndex,
                    ptpbasedClockTransDefaultDSInstanceIndex
                    }
    ::= { ptpbasedClockTransDefaultDSTable 1 }

PtpbasedClockTransDefaultDSEntry ::= SEQUENCE {
    ptpbasedClockTransDefaultDSDomainIndex PtpClockDomainType,
    ptpbasedClockTransDefaultDSInstanceIndex PtpClockInstanceType,
    ptpbasedClockTransDefaultDSClockIdentity PtpClockIdentity,
    ptpbasedClockTransDefaultDSNumOfPorts Counter32,
    ptpbasedClockTransDefaultDSDelay PtpClockMechanismType,
    ptpbasedClockTransDefaultDSPrimaryDomain PtpClockDomainType
}

ptpbasedClockTransDefaultDSDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbasedClockTransDefaultDSEntry 1 }

ptpbasedClockTransDefaultDSInstanceIndex OBJECT-TYPE
    SYNTAX          PtpClockInstanceType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the instance of the clock for this clock
        type in the given domain."
    ::= { ptpbasedClockTransDefaultDSEntry 2 }

ptpbasedClockTransDefaultDSClockIdentity OBJECT-TYPE
    SYNTAX          PtpClockIdentity
    MAX-ACCESS      read-only
    STATUS          current

```

DESCRIPTION

"This object specifies the value of the clockIdentity attribute of the local clock."

REFERENCE

"Section 8.3.2.2.1 ('transparentClockDefaultDS.clockIdentity') of [IEEE-1588-2008]"

::= { ptpbaseClockTransDefaultDSEntry 3 }

ptpbaseClockTransDefaultDSNumOfPorts OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the number of PTP ports of the device. These counters are discontinuous."

REFERENCE

"Section 8.3.2.2.2 ('transparentClockDefaultDS.numberPorts') of [IEEE-1588-2008]"

::= { ptpbaseClockTransDefaultDSEntry 4 }

ptpbaseClockTransDefaultDSDelay OBJECT-TYPE

SYNTAX PtpClockMechanismType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object, if the transparent clock is an end-to-end transparent clock, has the value of e2e; if the transparent clock is a peer-to-peer transparent clock, the value is p2p."

REFERENCE

"Section 8.3.2.3.1 ('transparentClockDefaultDS.delayMechanism') of [IEEE-1588-2008]"

::= { ptpbaseClockTransDefaultDSEntry 5 }

ptpbaseClockTransDefaultDSPrimaryDomain OBJECT-TYPE

SYNTAX PtpClockDomainType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the value of the primary synchronization domain. The initialization value is 0."

REFERENCE

"Section 8.3.2.3.2 ('transparentClockDefaultDS.primaryDomain') of [IEEE-1588-2008]"

::= { ptpbaseClockTransDefaultDSEntry 6 }

```

ptpbasedClockPortTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbasedClockPortEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about the clock ports for a particular
        domain."
    ::= { ptpbaseMIBClockInfo 7 }

ptpbasedClockPortEntry OBJECT-TYPE
    SYNTAX          PtpbasedClockPortEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        clock port."
    INDEX
        {
            ptpbasedClockPortDomainIndex,
            ptpbasedClockPortClockTypeIndex,
            ptpbasedClockPortClockInstanceIndex,
            ptpbasedClockPortTablePortNumberIndex
        }
    ::= { ptpbasedClockPortTable 1 }

PtpbasedClockPortEntry ::= SEQUENCE {
    ptpbasedClockPortDomainIndex      PtpClockDomainType,
    ptpbasedClockPortClockTypeIndex   PtpClockType,
    ptpbasedClockPortClockInstanceIndex PtpClockInstanceType,
    ptpbasedClockPortTablePortNumberIndex PtpClockPortNumber,
    ptpbasedClockPortName              DisplayString,
    ptpbasedClockPortRole              PtpClockRoleType,
    ptpbasedClockPortSyncTwoStep       TruthValue,
    ptpbasedClockPortCurrentPeerAddressType AutonomousType,
    ptpbasedClockPortCurrentPeerAddress
PtpClockPortTransportTypeAddress,
    ptpbasedClockPortNumOfAssociatedPorts Gauge32
}

ptpbasedClockPortDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbasedClockPortEntry 1 }

```

ptpbasedClockPortClockTypeIndex OBJECT-TYPE

SYNTAX PtpClockType
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"This object specifies the clock type as defined in the textual convention description."

::= { ptpbasedClockPortEntry 2 }

ptpbasedClockPortClockInstanceIndex OBJECT-TYPE

SYNTAX PtpClockInstanceType
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"This object specifies the instance of the clock for this clock type in the given domain."

::= { ptpbasedClockPortEntry 3 }

ptpbasedClockPortTablePortNumberIndex OBJECT-TYPE

SYNTAX PtpClockPortNumber
 MAX-ACCESS not-accessible
 STATUS current

DESCRIPTION

"This object specifies the PTP portNumber for this port."

::= { ptpbasedClockPortEntry 4 }

ptpbasedClockPortName OBJECT-TYPE

SYNTAX DisplayString (SIZE (1..64))
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies the PTP clock port name configured on the node."

::= { ptpbasedClockPortEntry 5 }

ptpbasedClockPortRole OBJECT-TYPE

SYNTAX PtpClockRoleType
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object describes the current role (slave/master) of the port."

::= { ptpbasedClockPortEntry 6 }

ptpbasedClockPortSyncTwoStep OBJECT-TYPE

SYNTAX TruthValue
 MAX-ACCESS read-only
 STATUS current

DESCRIPTION

"This object specifies that two-step clock operation between the PTP master and slave device is enabled."

::= { ptpbaseClockPortEntry 7 }

ptpbaseClockPortCurrentPeerAddressType OBJECT-TYPE

SYNTAX AutonomousType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the current peer's network address type used for PTP communication."

::= { ptpbaseClockPortEntry 8 }

ptpbaseClockPortCurrentPeerAddress OBJECT-TYPE

SYNTAX PtpClockPortTransportTypeAddress

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the current peer's network address used for PTP communication."

::= { ptpbaseClockPortEntry 9 }

ptpbaseClockPortNumOfAssociatedPorts OBJECT-TYPE

SYNTAX Gauge32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the following:

For a master port - the number of PTP slave sessions (peers) associated with this PTP port.

For a slave port - the number of masters available to this slave port (might or might not be peered)."

::= { ptpbaseClockPortEntry 10 }

ptpbaseClockPortDSTable OBJECT-TYPE

SYNTAX SEQUENCE OF PtpbaseClockPortDSEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of information about the clock's portDS for a particular domain."

::= { ptpbaseMIBClockInfo 8 }

```

ptpbasedClockPortDSEntry OBJECT-TYPE
    SYNTAX          PtpbasedClockPortDSEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains portDS information for
        a single clock port."
    INDEX           {
                    ptpbasedClockPortDSDomainIndex,
                    ptpbasedClockPortDSClockTypeIndex,
                    ptpbasedClockPortDSClockInstanceIndex,
                    ptpbasedClockPortDSPortNumberIndex
                    }
    ::= { ptpbasedClockPortDSTable 1 }

PtpbasedClockPortDSEntry ::= SEQUENCE {
    ptpbasedClockPortDSDomainIndex      PtpClockDomainType,
    ptpbasedClockPortDSClockTypeIndex   PtpClockType,
    ptpbasedClockPortDSClockInstanceIndex PtpClockInstanceType,
    ptpbasedClockPortDSPortNumberIndex  PtpClockPortNumber,
    ptpbasedClockPortDSName             DisplayString,
    ptpbasedClockPortDSPortIdentity     OCTET STRING,
    ptpbasedClockPortDSlogAnnouncementInterval PtpClockIntervalBase2,
    ptpbasedClockPortDSAnnounceRctTimeout Integer32,
    ptpbasedClockPortDSlogSyncInterval  PtpClockIntervalBase2,
    ptpbasedClockPortDSMinDelayReqInterval Integer32,
    ptpbasedClockPortDSPeerDelayReqInterval Integer32,
    ptpbasedClockPortDSDelayMech        PtpClockMechanismType,
    ptpbasedClockPortDSPeerMeanPathDelay PtpClockTimeInterval,
    ptpbasedClockPortDSGrantDuration    Unsigned32,
    ptpbasedClockPortDSPTPVersion       Unsigned32
}

ptpbasedClockPortDSDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbasedClockPortDSEntry 1 }

ptpbasedClockPortDSClockTypeIndex OBJECT-TYPE
    SYNTAX          PtpClockType
    MAX-ACCESS      not-accessible
    STATUS          current

```

DESCRIPTION

"This object specifies the clock type as defined in the textual convention description."

::= { ptpbaseClockPortDSEntry 2 }

ptpbaseClockPortDSClockInstanceIndex OBJECT-TYPE

SYNTAX PtpClockInstanceType

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the instance of the clock for this clock type in the given domain."

::= { ptpbaseClockPortDSEntry 3 }

ptpbaseClockPortDSPortNumberIndex OBJECT-TYPE

SYNTAX PtpClockPortNumber

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the PTP portNumber associated with this PTP port."

::= { ptpbaseClockPortDSEntry 4 }

ptpbaseClockPortDSName OBJECT-TYPE

SYNTAX DisplayString (SIZE (1..64))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the PTP clock portDS name."

::= { ptpbaseClockPortDSEntry 5 }

ptpbaseClockPortDSPortIdentity OBJECT-TYPE

SYNTAX OCTET STRING(SIZE(1..256))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the PTP clock port Identity."

::= { ptpbaseClockPortDSEntry 6 }

ptpbaseClockPortDSlogAnnouncementInterval OBJECT-TYPE

SYNTAX PtpClockIntervalBase2

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Announce message transmission interval associated with this clock port."

::= { ptpbaseClockPortDSEntry 7 }

ptpbasedClockPortDSAnnounceRctTimeout OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Announce receipt timeout associated with this clock port."

::= { ptpbasedClockPortDSEntry 8 }

ptpbasedClockPortDSlogSyncInterval OBJECT-TYPE

SYNTAX PtpClockIntervalBase2

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Sync message transmission interval."

::= { ptpbasedClockPortDSEntry 9 }

ptpbasedClockPortDSMinDelayReqInterval OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Delay_Req message transmission interval."

::= { ptpbasedClockPortDSEntry 10 }

ptpbasedClockPortDSPeerDelayReqInterval OBJECT-TYPE

SYNTAX Integer32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Pdelay_Req message transmission interval."

::= { ptpbasedClockPortDSEntry 11 }

ptpbasedClockPortDSDelayMech OBJECT-TYPE

SYNTAX PtpClockMechanismType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the delay mechanism used. If the clock is an end-to-end clock, the value is e2e; if the clock is a peer to-peer clock, the value is p2p."

::= { ptpbasedClockPortDSEntry 12 }

ptpbasedClockPortDSPeerMeanPathDelay OBJECT-TYPE

SYNTAX PtpClockTimeInterval

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the peer meanPathDelay."

::= { ptpbasedClockPortDSEntry 13 }

ptpbasedClockPortDSGrantDuration OBJECT-TYPE

SYNTAX Unsigned32

UNITS "seconds"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the grant duration allocated by the master."

::= { ptpbasedClockPortDSEntry 14 }

ptpbasedClockPortDSPTPVersion OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the PTP version being used."

::= { ptpbasedClockPortDSEntry 15 }

ptpbasedClockPortRunningTable OBJECT-TYPE

SYNTAX SEQUENCE OF PtpbasedClockPortRunningEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"Table of information about the clock ports running datasets for a particular domain."

::= { ptpbasedMIBClockInfo 9 }

ptpbasedClockPortRunningEntry OBJECT-TYPE

SYNTAX PtpbasedClockPortRunningEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"A table entry that contains running dataset information about a single clock port."

```

INDEX          {
                ptpbaseClockPortRunningDomainIndex,
                ptpbaseClockPortRunningClockTypeIndex,
                ptpbaseClockPortRunningClockInstanceIndex,
                ptpbaseClockPortRunningPortNumberIndex
            }
 ::= { ptpbaseClockPortRunningTable 1 }

PtpbaseClockPortRunningEntry ::= SEQUENCE {
    ptpbaseClockPortRunningDomainIndex      PtpClockDomainType,
    ptpbaseClockPortRunningClockTypeIndex   PtpClockType,
    ptpbaseClockPortRunningClockInstanceIndex PtpClockInstanceType,
    ptpbaseClockPortRunningPortNumberIndex  PtpClockPortNumber,
    ptpbaseClockPortRunningName             DisplayString,
    ptpbaseClockPortRunningState            PtpClockPortState,
    ptpbaseClockPortRunningRole             PtpClockRoleType,
    ptpbaseClockPortRunningInterfaceIndex   InterfaceIndexOrZero,
    ptpbaseClockPortRunningTransport        AutonomousType,
    ptpbaseClockPortRunningEncapsulationType AutonomousType,
    ptpbaseClockPortRunningTxMode           PtpClockTxModeType,
    ptpbaseClockPortRunningRxMode           PtpClockTxModeType,
    ptpbaseClockPortRunningPacketsReceived  Counter64,
    ptpbaseClockPortRunningPacketsSent      Counter64
}

ptpbaseClockPortRunningDomainIndex OBJECT-TYPE
    SYNTAX      PtpClockDomainType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object specifies the domain number used to create a
        logical group of PTP devices."
    ::= { ptpbaseClockPortRunningEntry 1 }

ptpbaseClockPortRunningClockTypeIndex OBJECT-TYPE
    SYNTAX      PtpClockType
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "This object specifies the clock type as defined in the
        textual convention description."
    ::= { ptpbaseClockPortRunningEntry 2 }

ptpbaseClockPortRunningClockInstanceIndex OBJECT-TYPE
    SYNTAX      PtpClockInstanceType
    MAX-ACCESS  not-accessible
    STATUS      current

```

DESCRIPTION

"This object specifies the instance of the clock for this clock type in the given domain."

```
::= { ptpbaseClockPortRunningEntry 3 }
```

ptpbaseClockPortRunningPortNumberIndex OBJECT-TYPE

SYNTAX PtpClockPortNumber

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"This object specifies the PTP portNumber associated with this clock port."

```
::= { ptpbaseClockPortRunningEntry 4 }
```

ptpbaseClockPortRunningName OBJECT-TYPE

SYNTAX DisplayString (SIZE (1..64))

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the PTP clock port name."

```
::= { ptpbaseClockPortRunningEntry 5 }
```

ptpbaseClockPortRunningState OBJECT-TYPE

SYNTAX PtpClockPortState

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the port state returned by PTP engine:

initializing

faulty

disabled

listening

preMaster

master

passive

uncalibrated

slave "

```
::= { ptpbaseClockPortRunningEntry 6 }
```

ptpbaseClockPortRunningRole OBJECT-TYPE

SYNTAX PtpClockRoleType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the Clock Role."

```
::= { ptpbaseClockPortRunningEntry 7 }
```

ptpbasedClockPortRunningInterfaceIndex OBJECT-TYPE

SYNTAX InterfaceIndexOrZero

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the interface on the node being used by the PTP clock for PTP communication."

::= { ptpbasedClockPortRunningEntry 8 }

ptpbasedClockPortRunningTransport OBJECT-TYPE

SYNTAX AutonomousType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the transport protocol being used for PTP communication (the mapping used)."

::= { ptpbasedClockPortRunningEntry 9 }

ptpbasedClockPortRunningEncapsulationType OBJECT-TYPE

SYNTAX AutonomousType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the type of encapsulation if the interface is adding extra layers (e.g., VLAN or Pseudowire encapsulation) for the PTP messages."

::= { ptpbasedClockPortRunningEntry 10 }

ptpbasedClockPortRunningTxMode OBJECT-TYPE

SYNTAX PtpClockTxModeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the clock transmission mode as:

unicast: Using unicast communication channel

multicast: Using multicast communication channel

multicast-mix: Using multicast-unicast communication channel"

::= { ptpbasedClockPortRunningEntry 11 }

ptpbasedClockPortRunningRxMode OBJECT-TYPE

SYNTAX PtpClockTxModeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the clock receive mode as:

unicast: Using unicast communication channel

multicast: Using multicast communication channel

multicast-mix: Using multicast-unicast communication channel"

```
::= { ptpbaseClockPortRunningEntry 12 }
```

```
ptpbaseClockPortRunningPacketsReceived OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
UNITS "packets"
```

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

```
STATUS current
```

```
DESCRIPTION
```

```
"This object specifies the packets received on the clock port
(cumulative). These counters are discontinuous."
```

```
::= { ptpbaseClockPortRunningEntry 13 }
```

```
ptpbaseClockPortRunningPacketsSent OBJECT-TYPE
```

```
SYNTAX Counter64
```

```
UNITS "packets"
```

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

```
STATUS current
```

```
DESCRIPTION
```

```
"This object specifies the packets sent on the clock port
(cumulative). These counters are discontinuous."
```

```
::= { ptpbaseClockPortRunningEntry 14 }
```

```
ptpbaseClockPortTransDSTable OBJECT-TYPE
```

```
SYNTAX SEQUENCE OF PtpbaseClockPortTransDSEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

```
"Table of information about the transparentClockPortDS
for a particular domain."
```

```
::= { ptpbaseMIBClockInfo 10 }
```

```
ptpbaseClockPortTransDSEntry OBJECT-TYPE
```

```
SYNTAX PtpbaseClockPortTransDSEntry
```

```
MAX-ACCESS not-accessible
```

```
STATUS current
```

```
DESCRIPTION
```

```
"A table entry that contains clock port transparent
dataset information about a single clock port."
```

```
INDEX {
    ptpbaseClockPortTransDSDomainIndex,
    ptpbaseClockPortTransDSInstanceIndex,
    ptpbaseClockPortTransDSPortNumberIndex
}
```

```
::= { ptpbaseClockPortTransDSTable 1 }
```

```

PtpbaseClockPortTransDSEntry ::= SEQUENCE {
    ptpbaseClockPortTransDSDomainIndex      PtpClockDomainType,
    ptpbaseClockPortTransDSInstanceIndex    PtpClockInstanceType,
    ptpbaseClockPortTransDSPortNumberIndex  PtpClockPortNumber,
    ptpbaseClockPortTransDSPortIdentity     PtpClockIdentity,
    ptpbaseClockPortTransDSlogMinPdelayReqInt PtpClockIntervalBase2,
    ptpbaseClockPortTransDSFaultyFlag      TruthValue,
    ptpbaseClockPortTransDSPeerMeanPathDelay PtpClockTimeInterval
}

```

ptpbaseClockPortTransDSDomainIndex OBJECT-TYPE

```

SYNTAX      PtpClockDomainType
MAX-ACCESS  not-accessible
STATUS      current

```

DESCRIPTION

"This object specifies the domain number used to create a logical group of PTP devices."

```
 ::= { ptpbaseClockPortTransDSEntry 1 }
```

ptpbaseClockPortTransDSInstanceIndex OBJECT-TYPE

```

SYNTAX      PtpClockInstanceType
MAX-ACCESS  not-accessible
STATUS      current

```

DESCRIPTION

"This object specifies the instance of the clock for this clock type in the given domain."

```
 ::= { ptpbaseClockPortTransDSEntry 2 }
```

ptpbaseClockPortTransDSPortNumberIndex OBJECT-TYPE

```

SYNTAX      PtpClockPortNumber
MAX-ACCESS  not-accessible
STATUS      current

```

DESCRIPTION

"This object specifies the PTP portNumber associated with this port."

```

REFERENCE   "Section 7.5.2 ('Port Identity')
             of [IEEE-1588-2008]"

```

```
 ::= { ptpbaseClockPortTransDSEntry 3 }
```

ptpbaseClockPortTransDSPortIdentity OBJECT-TYPE

```

SYNTAX      PtpClockIdentity
MAX-ACCESS  read-only
STATUS      current

```

DESCRIPTION

"This object specifies the value of the PortIdentity attribute of the local port."

REFERENCE

"Section 8.3.3.2.1 ('transparentClockPortDS.portIdentity') of [IEEE-1588-2008]"

::= { ptpbaseClockPortTransDSEntry 4 }

ptpbaseClockPortTransDSlogMinPdelayReqInt OBJECT-TYPE

SYNTAX PtpClockIntervalBase2

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the value of the logarithm to the base 2 of the minPdelayReqInterval."

REFERENCE

"Section 8.3.3.3.1 ('transparentClockPortDS.logMinPdelayReqInterval') of [IEEE-1588-2008]"

::= { ptpbaseClockPortTransDSEntry 5 }

ptpbaseClockPortTransDSFaultyFlag OBJECT-TYPE

SYNTAX TruthValue

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies the value TRUE if the port is faulty and FALSE if the port is operating normally."

REFERENCE

"Section 8.3.3.3.2 ('transparentClockPortDS.faultyFlag') of [IEEE-1588-2008]"

::= { ptpbaseClockPortTransDSEntry 6 }

ptpbaseClockPortTransDSPeerMeanPathDelay OBJECT-TYPE

SYNTAX PtpClockTimeInterval

UNITS "Time Interval"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"This object specifies, if the delayMechanism used is p2p, the value of the estimate of the current one-way propagation delay, i.e., <meanPathDelay> on the link attached to this port, computed using the peer delay mechanism. If the value of the delayMechanism used is e2e, then the value will be zero."

REFERENCE

"Section 8.3.3.3.3 ('transparentClockPortDS.peerMeanPathDelay') of [IEEE-1588-2008]"

::= { ptpbaseClockPortTransDSEntry 7 }

```

ptpbasedClockPortAssociateTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbasedClockPortAssociateEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "Table of information about a given port's associated ports.

        For a master port: multiple slave ports that have established
                           sessions with the current master port.
        For a slave port:  the list of masters available for a given
                           slave port.

        Session information (packets, errors) to be displayed based on
        availability and scenario."
    ::= { ptpbaseMIBClockInfo 11 }

--
-- Well Known transport types for PTP communication.
--
ptpbasedWellKnownTransportTypes OBJECT IDENTIFIER ::= {
ptpbasedMIBClockInfo 12 }

ptpbasedTransportTypeIPversion4 OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "IP version 4"
    ::= { ptpbasedWellKnownTransportTypes 1 }

ptpbasedTransportTypeIPversion6 OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "IP version 6"
    ::= { ptpbasedWellKnownTransportTypes 2 }

ptpbasedTransportTypeEthernet OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "Ethernet"
    ::= { ptpbasedWellKnownTransportTypes 3 }

ptpbasedTransportTypeDeviceNET OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "Device NET"
    ::= { ptpbasedWellKnownTransportTypes 4 }

```



```
ptpbaseTransportTypeControlNET OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "Control NET"
    ::= { ptpbaseWellKnownTransportTypes 5 }

ptpbaseTransportTypeIEC61158 OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "IEC61158"
    ::= { ptpbaseWellKnownTransportTypes 6 }

--
-- Well Known encapsulation types for PTP communication.
--
ptpbaseWellKnownEncapsulationTypes OBJECT IDENTIFIER ::= {
  ptpbaseMIBClockInfo 13 }

ptpbaseEncapsulationTypeEthernet OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "Ethernet Encapsulation type."
    ::= { ptpbaseWellKnownEncapsulationTypes 1 }

ptpbaseEncapsulationTypeVLAN OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "VLAN Encapsulation type."
    ::= { ptpbaseWellKnownEncapsulationTypes 2 }

ptpbaseEncapsulationTypeUDPIPLSP OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "UDP/IP over MPLS Encapsulation type."
    ::= { ptpbaseWellKnownEncapsulationTypes 3 }

ptpbaseEncapsulationTypePWUDPIPLSP OBJECT-IDENTITY
  STATUS current
  DESCRIPTION
    "UDP/IP Pseudowire over MPLS Encapsulation type."
    ::= { ptpbaseWellKnownEncapsulationTypes 4 }
```

```

ptpbasesEncapsulationTypePWethernetLSP OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "Ethernet Pseudowire over MPLS Encapsulation type."
    ::= { ptpbaseWellKnownEncapsulationTypes 5 }

ptpbasesClockPortAssociateEntry OBJECT-TYPE
    SYNTAX          PtpbasesClockPortAssociateEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "A table entry that contains information about a single
        associated port for the given clock port."
    INDEX           {
                    ptpClockPortCurrentDomainIndex,
                    ptpClockPortCurrentClockTypeIndex,
                    ptpClockPortCurrentClockInstanceIndex,
                    ptpClockPortCurrentPortNumberIndex,
                    ptpbasesClockPortAssociatePortIndex
                    }
    ::= { ptpbasesClockPortAssociateTable 1 }

PtpbasesClockPortAssociateEntry ::= SEQUENCE {
    ptpClockPortCurrentDomainIndex          PtpClockDomainType,
    ptpClockPortCurrentClockTypeIndex      PtpClockType,
    ptpClockPortCurrentClockInstanceIndex  PtpClockInstanceType,
    ptpClockPortCurrentPortNumberIndex     PtpClockPortNumber,
    ptpbasesClockPortAssociatePortIndex    Unsigned32,
    ptpbasesClockPortAssociateAddressType  AutonomousType,
    ptpbasesClockPortAssociateAddress
PtpClockPortTransportTypeAddress,
    ptpbasesClockPortAssociatePacketsSent  Counter64,
    ptpbasesClockPortAssociatePacketsReceived Counter64,
    ptpbasesClockPortAssociateInErrors     Counter64,
    ptpbasesClockPortAssociateOutErrors    Counter64
}

ptpClockPortCurrentDomainIndex OBJECT-TYPE
    SYNTAX          PtpClockDomainType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the given port's domain number."
    ::= { ptpbasesClockPortAssociateEntry 1 }

```

```

ptpClockPortCurrentClockTypeIndex OBJECT-TYPE
    SYNTAX          PtpClockType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the given port's clock type."
    ::= { ptpbaseClockPortAssociateEntry 2 }

ptpClockPortCurrentClockInstanceIndex OBJECT-TYPE
    SYNTAX          PtpClockInstanceType
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the instance of the clock for this clock
        type in the given domain."
    ::= { ptpbaseClockPortAssociateEntry 3 }

ptpClockPortCurrentPortNumberIndex OBJECT-TYPE
    SYNTAX          PtpClockPortNumber
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the PTP portNumber for the given port."
    ::= { ptpbaseClockPortAssociateEntry 4 }

ptpbaseClockPortAssociatePortIndex OBJECT-TYPE
    SYNTAX          Unsigned32 (1..65535)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
        "This object specifies the associated port's serial number in
        the current port's context."
    ::= { ptpbaseClockPortAssociateEntry 5 }

ptpbaseClockPortAssociateAddressType OBJECT-TYPE
    SYNTAX          AutonomousType
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the peer port's network address type used
        for PTP communication. The OCTET STRING representation of the
        OID of ptpbaseWellKnownTransportTypes will be used in the values
        contained in the OCTET STRING."
    ::= { ptpbaseClockPortAssociateEntry 6 }

```

```

ptpbasedClockPortAssociateAddress OBJECT-TYPE
    SYNTAX          PtpClockPortTransportTypeAddress
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the peer port's network address used for
        PTP communication."
    ::= { ptpbasedClockPortAssociateEntry 7 }

ptpbasedClockPortAssociatePacketsSent OBJECT-TYPE
    SYNTAX          Counter64
    UNITS           "packets"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The number of packets sent to this peer port from the current
        port.  These counters are discontinuous."
    ::= { ptpbasedClockPortAssociateEntry 8 }

ptpbasedClockPortAssociatePacketsReceived OBJECT-TYPE
    SYNTAX          Counter64
    UNITS           "packets"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "The number of packets received from this peer port by the
        current port.  These counters are discontinuous."
    ::= { ptpbasedClockPortAssociateEntry 9 }

ptpbasedClockPortAssociateInErrors OBJECT-TYPE
    SYNTAX          Counter64
    UNITS           "packets"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the input errors associated with the
        peer port.  These counters are discontinuous."
    ::= { ptpbasedClockPortAssociateEntry 10 }

ptpbasedClockPortAssociateOutErrors OBJECT-TYPE
    SYNTAX          Counter64
    UNITS           "packets"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the output errors associated with the
        peer port.  These counters are discontinuous."
    ::= { ptpbasedClockPortAssociateEntry 11 }

```

-- Conformance Information Definition

```
ptpbaseMIBCompliances OBJECT IDENTIFIER
 ::= { ptpbaseMIBConformance 1 }
```

```
ptpbaseMIBGroups OBJECT IDENTIFIER
 ::= { ptpbaseMIBConformance 2 }
```

```
ptpbaseMIBCompliancesSystemInfo MODULE-COMPLIANCE
```

```
STATUS current
```

```
DESCRIPTION
```

"Compliance statement for agents that provide read-only support for PTPBASE-MIB to provide system-level information of clock devices. Such devices can only be monitored using this MIB module.

The module is implemented with support for read-only. In other words, only monitoring is available by implementing this MODULE-COMPLIANCE."

```
MODULE -- this module
```

```
MANDATORY-GROUPS { ptpbaseMIBSystemInfoGroup }
```

```
::= { ptpbaseMIBCompliances 1 }
```

```
ptpbaseMIBCompliancesClockInfo MODULE-COMPLIANCE
```

```
STATUS current
```

```
DESCRIPTION
```

"Compliance statement for agents that provide read-only support for PTPBASE-MIB to provide clock-related information. Such devices can only be monitored using this MIB module.

The module is implemented with support for read-only. In other words, only monitoring is available by implementing this MODULE-COMPLIANCE."

```
MODULE -- this module
```

```
MANDATORY-GROUPS {
    ptpbaseMIBClockCurrentDSGroup,
    ptpbaseMIBClockParentDSGroup,
    ptpbaseMIBClockDefaultDSGroup,
    ptpbaseMIBClockRunningGroup,
    ptpbaseMIBClockTimepropertiesGroup
}
```

```
::= { ptpbaseMIBCompliances 2 }
```

ptpbasesMIBCompliancesClockPortInfo MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"Compliance statement for agents that provide read-only support for PTPBASE-MIB to provide clock-port-related information. Such devices can only be monitored using this MIB module.

The module is implemented with support for read-only. In other words, only monitoring is available by implementing this MODULE-COMPLIANCE."

MODULE -- this module

MANDATORY-GROUPS {

ptpbasesMIBClockPortGroup,
ptpbasesMIBClockPortDSGroup,
ptpbasesMIBClockPortRunningGroup,
ptpbasesMIBClockPortAssociateGroup

}

::= { ptpbasesMIBCompliances 3 }

ptpbasesMIBCompliancesTransparentClockInfo MODULE-COMPLIANCE

STATUS current

DESCRIPTION

"Compliance statement for agents that provide read-only support for PTPBASE-MIB to provide transparent-clock-related information. Such devices can only be monitored using this MIB module.

The module is implemented with support for read-only. In other words, only monitoring is available by implementing this MODULE-COMPLIANCE."

MODULE -- this module

MANDATORY-GROUPS {

ptpbasesMIBClockTranparentDSGroup,
ptpbasesMIBClockPortTransDSGroup

}

::= { ptpbasesMIBCompliances 4 }

ptpbasesMIBSystemInfoGroup OBJECT-GROUP

OBJECTS {

ptpbasesSystemDomainTotals,
ptpDomainClockPortsTotal,
ptpbasesSystemProfile

}

STATUS current

DESCRIPTION

"Group that aggregates objects describing system-wide information"

::= { ptpbasesMIBGroups 1 }

ptpbasesMIBClockCurrentDSGroup OBJECT-GROUP

```

OBJECTS          {
    ptpbaseClockCurrentDSStepsRemoved,
    ptpbaseClockCurrentDSOffsetFromMaster,
    ptpbaseClockCurrentDSMeanPathDelay
}
STATUS           current
DESCRIPTION      "Group that aggregates objects describing PTP currentDS
information"
 ::= { ptpbaseMIBGroups 2 }

```

ptpbasesMIBClockParentDSGroup OBJECT-GROUP

```

OBJECTS          {
    ptpbaseClockParentDSParentPortIdentity,
    ptpbaseClockParentDSParentStats,
    ptpbaseClockParentDSOffset,
    ptpbaseClockParentDSClockPhChRate,
    ptpbaseClockParentDSGMClockIdentity,
    ptpbaseClockParentDSGMClockPriority1,
    ptpbaseClockParentDSGMClockPriority2,
    ptpbaseClockParentDSGMClockQualityClass,
    ptpbaseClockParentDSGMClockQualityAccuracy,
    ptpbaseClockParentDSGMClockQualityOffset
}
STATUS           current
DESCRIPTION      "Group that aggregates objects describing PTP parentDS
information"
 ::= { ptpbaseMIBGroups 3 }

```

ptpbasesMIBClockDefaultDSGroup OBJECT-GROUP

```

OBJECTS          {
    ptpbaseClockDefaultDSTwoStepFlag,
    ptpbaseClockDefaultDSClockIdentity,
    ptpbaseClockDefaultDSPriority1,
    ptpbaseClockDefaultDSPriority2,
    ptpbaseClockDefaultDSSlaveOnly,
    ptpbaseClockDefaultDSQualityClass,
    ptpbaseClockDefaultDSQualityAccuracy,
    ptpbaseClockDefaultDSQualityOffset
}
STATUS           current
DESCRIPTION      "Group that aggregates objects describing PTP defaultDS
information"
 ::= { ptpbaseMIBGroups 4 }

```

ptpbasesMIBClockRunningGroup OBJECT-GROUP

```

OBJECTS      {
    ptpbaseClockRunningState,
    ptpbaseClockRunningPacketsSent,
    ptpbaseClockRunningPacketsReceived
}

```

```

STATUS      current

```

DESCRIPTION

```

"Group that aggregates objects describing PTP running state
information"

```

```

 ::= { ptpbaseMIBGroups 5 }

```

ptpbasesMIBClockTimepropertiesGroup OBJECT-GROUP

```

OBJECTS      {
    ptpbaseClockTimePropertiesDSCurrentUTCOffsetValid,
    ptpbaseClockTimePropertiesDSCurrentUTCOffset,
    ptpbaseClockTimePropertiesDSLeap59,
    ptpbaseClockTimePropertiesDSLeap61,
    ptpbaseClockTimePropertiesDSTimeTraceable,
    ptpbaseClockTimePropertiesDSFreqTraceable,
    ptpbaseClockTimePropertiesDSPTPTimescale,
    ptpbaseClockTimePropertiesDSSource
}

```

```

STATUS      current

```

DESCRIPTION

```

"Group that aggregates objects describing PTP Time Properties
information"

```

```

 ::= { ptpbaseMIBGroups 6 }

```

ptpbasesMIBClockTranparentDSGroup OBJECT-GROUP

```

OBJECTS      {
    ptpbaseClockTransDefaultDSClockIdentity,
    ptpbaseClockTransDefaultDSNumOfPorts,
    ptpbaseClockTransDefaultDSDelay,
    ptpbaseClockTransDefaultDSPrimaryDomain
}

```

```

STATUS      current

```

DESCRIPTION

```

"Group that aggregates objects describing PTP
transparentClockDefaultDS information"

```

```

 ::= { ptpbaseMIBGroups 7 }

```

ptpbasesMIBClockPortGroup OBJECT-GROUP

```

OBJECTS      {
    ptpbaseClockPortName,
    ptpbaseClockPortSyncTwoStep,
    ptpbaseClockPortCurrentPeerAddress,
    ptpbaseClockPortNumOfAssociatedPorts,
}

```



```

        ptpbaseClockPortCurrentPeerAddressType,
        ptpbaseClockPortRole
    }
STATUS          current
DESCRIPTION
    "Group that aggregates objects describing information for a
    given PTP Port"
 ::= { ptpbaseMIBGroups 8 }

ptpbaseMIBClockPortDSGroup OBJECT-GROUP
OBJECTS         {
    ptpbaseClockPortDSName,
    ptpbaseClockPortDSPortIdentity,
    ptpbaseClockPortDSlogAnnouncementInterval,
    ptpbaseClockPortDSAnnounceRctTimeout,
    ptpbaseClockPortDSlogSyncInterval,
    ptpbaseClockPortDSMinDelayReqInterval,
    ptpbaseClockPortDSPeerDelayReqInterval,
    ptpbaseClockPortDSDelayMech,
    ptpbaseClockPortDSPeerMeanPathDelay,
    ptpbaseClockPortDSGrantDuration,
    ptpbaseClockPortDSPTPVersion
}
STATUS          current
DESCRIPTION
    "Group that aggregates objects describing PTP portDS
    information"
 ::= { ptpbaseMIBGroups 9 }

ptpbaseMIBClockPortRunningGroup OBJECT-GROUP
OBJECTS         {
    ptpbaseClockPortRunningName,
    ptpbaseClockPortRunningState,
    ptpbaseClockPortRunningRole,
    ptpbaseClockPortRunningInterfaceIndex,
    ptpbaseClockPortRunningTransport,
    ptpbaseClockPortRunningEncapsulationType,
    ptpbaseClockPortRunningTxMode,
    ptpbaseClockPortRunningRxMode,
    ptpbaseClockPortRunningPacketsReceived,
    ptpbaseClockPortRunningPacketsSent
}
STATUS          current
DESCRIPTION
    "Group that aggregates objects describing PTP running interface
    information"
 ::= { ptpbaseMIBGroups 10 }

```

```
ptpbaseMIBClockPortTransDSGroup OBJECT-GROUP
    OBJECTS
        {
            ptpbaseClockPortTransDSPortIdentity,
            ptpbaseClockPortTransDSLogMinPdelayReqInt,
            ptpbaseClockPortTransDSFaultyFlag,
            ptpbaseClockPortTransDSPeerMeanPathDelay
        }
    STATUS
        current
    DESCRIPTION
        "Group that aggregates objects describing PTP
        transparentClockPortDS information"
    ::= { ptpbaseMIBGroups 11 }

ptpbaseMIBClockPortAssociateGroup OBJECT-GROUP
    OBJECTS
        {
            ptpbaseClockPortAssociatePacketsSent,
            ptpbaseClockPortAssociatePacketsReceived,
            ptpbaseClockPortAssociateAddress,
            ptpbaseClockPortAssociateAddressType,
            ptpbaseClockPortAssociateInErrors,
            ptpbaseClockPortAssociateOutErrors
        }
    STATUS
        current
    DESCRIPTION
        "Group that aggregates objects describing information on peer
        PTP ports for a given PTP clock port"
    ::= { ptpbaseMIBGroups 12 }

END
```

5. Security Considerations

There are no management objects defined in this MIB module that have a MAX-ACCESS clause of read-write and/or read-create. So, if this MIB module is implemented correctly, then there is no risk that an intruder can alter or create any management objects of this MIB module via direct SNMP SET operations.

Some of the readable objects in this MIB module (i.e., objects with a MAX-ACCESS other than not-accessible) may be considered sensitive or vulnerable in some network environments. It is thus important to control even GET and/or NOTIFY access to these objects and possibly to even encrypt the values of these objects when sending them over the network via SNMP.

These are the tables and objects and their sensitivity/vulnerability:

ptpDomainClockPortsTotal, ptpbaseSystemDomainTotals, and ptpbaseSystemProfile expose general information about the clock system.

ptpbaseClockRunningState, ptpbaseClockRunningPacketsSent, and ptpbaseClockRunningPacketsReceived expose a clock's current running status.

ptpbaseClockCurrentDSStepsRemoved, ptpbaseClockCurrentDSOffsetFromMaster, and ptpbaseClockCurrentDSMeanPathDelay expose the values of a clock's current dataset (currentDS).

ptpbaseClockParentDSParentPortIdentity, ptpbaseClockParentDSParentStats, ptpbaseClockParentDSOffset, ptpbaseClockParentDSClockPhChRate, ptpbaseClockParentDSGMClockIdentity, ptpbaseClockParentDSGMClockPriority1, ptpbaseClockParentDSGMClockPriority2, ptpbaseClockParentDSGMClockQualityClass, ptpbaseClockParentDSGMClockQualityAccuracy, and ptpbaseClockParentDSGMClockQualityOffset expose the values of a clock's parent dataset (parentDS).

ptpbaseClockDefaultDSTwoStepFlag, ptpbaseClockDefaultDSClockIdentity, ptpbaseClockDefaultDSPriority1, ptpbaseClockDefaultDSPriority2, ptpbaseClockDefaultDSSlaveOnly, ptpbaseClockDefaultDSQualityClass, ptpbaseClockDefaultDSQualityAccuracy, and ptpbaseClockDefaultDSQualityOffset expose the values of a clock's default dataset (defaultDS).

ptpbasedClockTimePropertiesDSCurrentUTCOffsetValid,
ptpbasedClockTimePropertiesDSCurrentUTCOffset,
ptpbasedClockTimePropertiesDSLeap59,
ptpbasedClockTimePropertiesDSLeap61,
ptpbasedClockTimePropertiesDSTimeTraceable,
ptpbasedClockTimePropertiesDSFreqTraceable,
ptpbasedClockTimePropertiesDSPTPTimescale, and
ptpbasedClockTimePropertiesDSSource expose the values of a clock's
time properties dataset (timePropertiesDS).

ptpbasedClockTransDefaultDSClockIdentity,
ptpbasedClockTransDefaultDSNumOfPorts,
ptpbasedClockTransDefaultDSDelay, and
ptpbasedClockTransDefaultDSPrimaryDomain expose the values of a
transparent clock's default dataset (transparentClockDefaultDS).

ptpbasedClockPortName, ptpbasedClockPortRole,
ptpbasedClockPortSyncTwoStep,
ptpbasedClockPortCurrentPeerAddressType,
ptpbasedClockPortCurrentPeerAddress, and
ptpbasedClockPortNumOfAssociatedPorts expose general information
about a clock port.

ptpbasedClockPortRunningName, ptpbasedClockPortRunningState,
ptpbasedClockPortRunningRole,
ptpbasedClockPortRunningInterfaceIndex,
ptpbasedClockPortRunningTransport,
ptpbasedClockPortRunningEncapsulationType,
ptpbasedClockPortRunningTxMode, ptpbasedClockPortRunningRxMode,
ptpbasedClockPortRunningPacketsReceived, and
ptpbasedClockPortRunningPacketsSent expose a clock port's current
running status.

ptpbasedClockPortDSName, ptpbasedClockPortDSPortIdentity,
ptpbasedClockPortDSlogAnnouncementInterval,
ptpbasedClockPortDSAnnounceRctTimeout,
ptpbasedClockPortDSlogSyncInterval,
ptpbasedClockPortDSMinDelayReqInterval,
ptpbasedClockPortDSPeerDelayReqInterval,
ptpbasedClockPortDSDelayMech, ptpbasedClockPortDSPeerMeanPathDelay,
ptpbasedClockPortDSGrantDuration, and ptpbasedClockPortDSPTPVersion
expose the values of a clock port's port dataset (portDS).

ptpbasedClockPortTransDSPortIdentity,
ptpbasedClockPortTransDSlogMinPdelayReqInt,
ptpbasedClockPortTransDSFaultyFlag, and
ptpbasedClockPortTransDSPeerMeanPathDelay expose the values of a
transparent clock port's port dataset (transparentClockPortDS).

ptpbasedClockPortAssociateAddressType,
 ptpbasedClockPortAssociateAddress,
 ptpbasedClockPortAssociatePacketsSent,
 ptpbasedClockPortAssociatePacketsReceived,
 ptpbasedClockPortAssociateInErrors, and
 ptpbasedClockPortAssociateOutErrors expose information about a
 clock port's peer node.

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example, by using IPsec), even then, there is no control as to who on the secure network is allowed to access and GET (read) the objects in this MIB module.

Implementations SHOULD provide the security features described by the SNMPv3 framework (see [RFC3410]), and implementations claiming compliance to the SNMPv3 standard MUST include full support for authentication and privacy via the User-based Security Model (USM) [RFC3414] with the AES cipher algorithm [RFC3826]. Implementations MAY also provide support for the Transport Security Model (TSM) [RFC5591] in combination with a secure transport such as SSH [RFC5592] or TLS/DTLS [RFC6353].

Further, deployment of SNMP versions prior to SNMPv3 is NOT recommended. Instead, it is recommended to deploy SNMPv3 and to enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to those objects only to those principals (users) that have legitimate rights to access them.

6. IANA Considerations

The MIB module defined in this document uses the following IANA-assigned OBJECT IDENTIFIER value recorded in the "Structure of Management Information (SMI) Numbers (MIB Module Registrations)" registry:

Descriptor	OBJECT IDENTIFIER value
-----	-----
ptpbasedMIB	{ mib-2 241 }

7. References

7.1. Normative References

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7.2. Informative References

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