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Precision Time Protocol Version 2 (PTPv2)
Management Information Base
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Abstract

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

This memo specifies a MIB module in a manner that is both compliant to the SMIv2, and semantically identical to the peer SMIv1 definitions.

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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 the ordinary clock, transparent clock, 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 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 draft.

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", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [[RFC 2119](#)].

[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 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.

[1.2. Change Log](#)

This section tracks changes made to the revisions of the Internet Drafts of this document. It will be *deleted* when the document is published as an RFC.

[draft-vinay-tictoc-ptp-mib](#)

-00 Mar 11 Initial version; showed structure of MIB

[draft-ietf-tictoc-ptp-mib](#)

-00 Jul 11 First full, syntactically correct and compileable MIB

-01 Jan 12 Revised following comments from Bert Wijnen:

- revised introduction to clarify the scope, and the relationship to other MIBs and profiles
- changed name to "ptpbase"
- corrected some data types
- corrected references and typos

-02 Jul 12 Revised following comment at IETF83:

- changed "ptpbaseClockPortRunningIPversion" to the more generic "ptpbaseClockPortRunningTransport", covering all transport types defined in [IEEE 1588-2008] (i.e. IPv4, IPv6, Ethernet, DeviceNet and ControlNet).
 - changed addresses associated with transports from "InetAddress" (for the IP transport) to a string, to allow for the different transport types.
- 03 Jul 12 Minor changes following comments from Andy Bierman:
- corrected some compilation errors
 - moved OBJECT-GROUP and MODULE-COMPLIANCE macros to the end
- 04 Jan 13 Changes:
- Use of 'AutonomousType' import
 - Display hint being specified for ClockIdentity, ClockInterval, ClockPortTransportTypeAddress Textual Conventions
 - Removal of the Textual convention ClockPortTransportType, replaced with the wellKnownTransportTypes
 - Modified ptpbaseClockPortCurrentPeerAddressType, ptpbaseClockPortRunningTransport, ptpbaseClockPortAssociateAddressType, to use AutonomousType.
 - various textual changes to descriptive text in response to comments
- 05 Feb 13 Several changes in response to comments from Alun Luchuk and Kevin Gross:
- Modified the use of wellKnownTransportTypes and wellKnownEncapsulationTypes
 - changed ptpbaseClockPortSyncOneStep to ptpbaseClockPortSyncTwoStep to match [IEEE 1588-2008] semantics
 - Re-ordered textual conventions to be alphabetic
 - Changed some types from Integer32 to use defined textual conventions
 - various minor descriptive text changes
- 06 Mar 14 Updated author information, and fixed typos
- 07 Mar 15 Updated author information, and fixed typo/enum
- 08 Feb 16 Updated MIB in response to Brian Haberman's comments:
- Fixed MIB date
 - Fixed references to [IEEE 1588-2008]
 - Changed "router" for "node"

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- 09 Apr 16 Updated following Dan Romascanu's MIB Doctor comments
- 10 Aug 16 Update following further feedback from Dan Romascanu.
Also updated security section to list out all objects
with MAX-ACCESS other than non-accessible, in response
to comments from Deborah Brungard and Alissa Cooper.
- 11 Aug 16 Used corrected version of MIB text
 - Reduced the DESCRIPTION section and moved to [section 3](#)
 - Added clarification that PtpClockIdentity can also be
non-EUI-64 address
 - Clarifications on PtpClockPortTransportTypeAddress,
and mentioned counters being discontinuous
 - Made PtpClockQualityClassType as enumerationUpdated overview section with a longer description.
- 12 Mar 17 Replaced direct quotations of [IEEE 1588-2008] with
references to avoid copyright issues.

[2. The SNMP Management Framework](#)

The SNMP Management Framework presently consists of five major components:

- o An overall architecture, described in STD62, [[RFC 3411](#)].
- o Mechanisms for describing and naming objects and events for the purpose of management. The first version of this Structure of Management Information (SMI) is called SMIV1 and described in STD 16: [[RFC 1155](#)], [[RFC 1212](#)] and [[RFC 1215](#)].
The second version, called SMIV2, is described in STD 58:
[[RFC 2578](#)], [[RFC 2579](#)] and [[RFC 2580](#)].
- o Message protocols for transferring management information. The first version of the SNMP message protocol is called SNMPv1 and described in STD 15 [[RFC 1157](#)]. A second version of the SNMP message protocol, which is not an Internet standards track protocol, is called SNMPv2c and described in [[RFC 1901](#)] and [[RFC 1906](#)]. The third version of the message protocol is called SNMPv3 and described in STD62: [[RFC 3417](#)], [[RFC 3412](#)] and [[RFC 3414](#)].
- o Protocol operations for accessing management information. The first set of protocol operations and associated PDU formats is described in STD 15 [[RFC 1157](#)]. A second set of protocol operations and associated PDU formats is described in STD 62 [[RFC 3416](#)].
- o A set of fundamental applications described in STD 62 [[RFC 3413](#)]

and the view-based access control mechanism described in STD 62 [[RFC 3415](#)].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the mechanisms defined in the SMI.

This memo specifies a MIB module that is compliant to the SMIv2. A MIB module conforming to the SMIv1 can be produced through the appropriate translations. The resulting translated MIB must be semantically equivalent, except where objects or events are omitted because no translation is possible (e.g., use of Counter64). Some machine readable information in SMIv2 will be converted into textual descriptions in SMIv1 during the translation process. However, this loss of machine readable information is not considered to change the semantics of the MIB module.

[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. IETF 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;
```

```
ptpbaseMIB MODULE-IDENTITY  
LAST-UPDATED      "201703120000Z"  
ORGANIZATION      "TICTOC Working Group"  
CONTACT-INFO  
    "WG Email: tictoc@ietf.org
```

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DESCRIPTION

"The MIB module for PTP version 2 (IEEE Std. 1588(TM)-2008)

Overview of PTP version 2 (IEEE Std. 1588(TM)-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 the earlier version IEEE Std. 1588(TM)-2002 (PTPv1). 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. The [IEEE 1588-2008] defines conformance and management capability also.

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 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 the sections of [IEEE 1588-2008].

Acronyms:

ARB	Arbitrary Timescale
E2E	End-to-End
EUI	Extended Unique Identifier
GPS	Global Positioning System
IANA	Internet Assigned Numbers Authority
IP	Internet Protocol
MAC	Media Access Control according to [IEEE 802.3-2008]
MAC-48	Used to identify hardware instances within 802-based networking applications. This is obsolete now.
NIST	National Institute of Standards and Technology
NTP	Network Time Protocol (see IETF [RFC 5905])
OUI	Organizational Unique Identifier (allocated by the IEEE)
P2P	Peer-to-Peer
PTP	Precision Time Protocol
TAI	International Atomic Time
TC	Transparent Clock
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(TM)-2008, 24 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 log		
REVISION	"201703120000Z"	
DESCRIPTION	"Draft 12, for IESG approval removed the IEEE standard texts."	
REVISION	"201608240000Z"	
DESCRIPTION	"Draft 11, for IESG approval after all comments, including the correct MIB."	
REVISION	"201608220000Z"	
DESCRIPTION	"Draft 10, for IESG approval after all comments addressed."	
REVISION	"201604200000Z"	
DESCRIPTION	"Draft 9, for IESG approval."	
REVISION	"201602220000Z"	
DESCRIPTION	"Draft 8, for IETF last call."	
::= { mib-2 XXX } -- XXX to be assigned by IANA		

-- 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, Table 2 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 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 and here is an abbreviated example extracted from [section 7.5.2.2.2](#) [IEEE 1588-2008]."

REFERENCE "Section 7.5.2.2.1 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,
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 Precision Time Protocol (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

"[Section 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

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"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 ptptimeWellKnownTransportTypes 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 Precision Time Protocol (PTP) features applicable to a device."

REFERENCE "[Section 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 sections [5.3.7](#), [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 enumerate values starting at zero when indicated by the protocol."

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

REFERENCE "[Section 5.3.7](#), 7.6.2.4 and Table 5 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."
```

"[Section 5.3.2](#) TimeInterval and [section 7.7.2.1](#) Timer interval

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```
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, 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 RFC 2578 allows for  
gaps and enumerate values to start with zero when indicated by  
the protocol."  
  
REFERENCE        "Section 5.3.7, 7.6.2.6 and Table 7 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  
   "An entry in the table, containing 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 it."  
 INDEX       {  
    ptpDomainIndex,  
    ptpInstanceIndex  
 }
```



```
 ::= { ptptimeTable 1 }

PtpbaseSystemEntry ::= SEQUENCE {
    ptptimeIndex          PtpClockDomainType,
    ptptimeIndex           PtpClockInstanceType,
    ptptimeClockPortsTotal Gauge32
}

ptptimeIndex 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"
    ::= { ptptimeEntry 1 }

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

ptptimeClockPortsTotal 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."
    ::= { ptptimeEntry 3 }

ptptimeSystemDomainTable 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."
 ::= { ptptimeMIBSystemInfo 2 }

ptptimeSystemDomainEntry OBJECT-TYPE
  SYNTAX          PtpTimeSystemDomainEntry
  MAX-ACCESS     not-accessible
  STATUS         current
  DESCRIPTION
    "An entry in the table, containing information about a single
    clock mode for the PTP system. A row entry gets added when PTP
    clocks are configured on the node."
  INDEX           { ptptimeSystemDomainClockTypeIndex }
  ::= { ptptimeSystemDomainTable 1 }

PtpTimeSystemDomainEntry ::= SEQUENCE {
  ptptimeSystemDomainClockTypeIndex PtpClockType,
  ptptimeSystemDomainTotals        Unsigned32
}

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

ptptimeSystemDomainTotals 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."
  ::= { ptptimeSystemDomainEntry 2 }

ptptimeSystemProfile OBJECT-TYPE
  SYNTAX          PtpClockProfileType
  MAX-ACCESS     read-only
  STATUS         current
```

DESCRIPTION

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"This object specifies the PTP Profile implemented on the system."

REFERENCE "Section 19.3 PTP profiles of [IEEE 1588-2008]"
 ::= { ptptimeProfile 3 }

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

ptpbaseClockCurrentDSEntry OBJECT-TYPE
 SYNTAX PtpbaseClockCurrentDSEntry
 MAX-ACCESS not-accessible
 STATUS current
 DESCRIPTION "An entry in the table, containing information about a single PTP clock Current Datasets for a domain."
 REFERENCE "[IEEE 1588-2008] section 8.2.2 currentDS data set member specifications of [IEEE 1588-2008]"
 INDEX {
 ptptimeClockCurrentDSDomainIndex,
 ptptimeClockCurrentDSClockTypeIndex,
 ptptimeClockCurrentDSInstanceIndex
 }
 ::= { ptptimeClockCurrentDSTable 1 }

PtpbaseClockCurrentDSEntry ::= SEQUENCE {
 ptptimeClockCurrentDSDomainIndex PtpClockDomainType,
 ptptimeClockCurrentDSClockTypeIndex PtpClockType,
 ptptimeClockCurrentDSInstanceIndex PtpClockInstanceType,
 ptptimeClockCurrentDSStepsRemoved Unsigned32,
 ptptimeClockCurrentDSOffsetFromMaster PtpClockTimeInterval,
 ptptimeClockCurrentDSMeanPathDelay PtpClockTimeInterval
 }

ptptimeClockCurrentDSDomainIndex 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."

```
::= { ptptimeClockCurrentDSEntry 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 }

ptpbaseClockCurrentDSStepsRemoved 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]"
    ::= { ptpbaseClockCurrentDSEntry 4 }

ptpbaseClockCurrentDSOffsetFromMaster 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]"
    ::= { ptpbaseClockCurrentDSEntry 5 }

ptpbaseClockCurrentDSMeanPathDelay OBJECT-TYPE
```

SYNTAX

PtpClockTimeInterval

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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]"
 ::= { ptpbaseClockCurrentDSEntry 6 }

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

ptpbaseClockParentDSEntry OBJECT-TYPE
SYNTAX PtpbaseClockParentDSEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry in the table, containing information about a single
PTP clock Parent Datasets for a domain."
REFERENCE
[Section 8.2.3](#) parentDS data set member specifications of
[IEEE 1588-2008]"
INDEX {
 ptpbaseClockParentDSDomainIndex,
 ptpbaseClockParentDSClockTypeIndex,
 ptpbaseClockParentDSInstanceIndex
}
 ::= { ptpbaseClockParentDSTable 1 }

PtpbaseClockParentDSEntry ::= SEQUENCE {
 ptpbaseClockParentDSDomainIndex PtpClockDomainType,
 ptpbaseClockParentDSClockTypeIndex PtpClockType,
 ptpbaseClockParentDSInstanceIndex PtpClockInstanceType,
 ptpbaseClockParentDSParentPortIdentity OCTET STRING,
 ptpbaseClockParentDSParentStats TruthValue,
 ptpbaseClockParentDSOffset PtpClockIntervalBase2,

`ptpbaseClockParentDSClockPhChRate` `Integer32,`

```
ptpbaseClockParentDSGMClockIdentity          PtpClockIdentity,
ptpbaseClockParentDSGMClockPriority1         Unsigned32,
ptpbaseClockParentDSGMClockPriority2         Unsigned32,
ptpbaseClockParentDSGMClockQualityClass      PtpClockQualityClassType,
ptpbaseClockParentDSGMClockQualityAccuracy   PtpClockQualityAccuracyType,
PtpClockQualityAccuracyType,
ptpbaseClockParentDSGMClockQualityOffset     Unsigned32
}

ptpbaseClockParentDSDomainIndex 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."
    ::= { ptpbaseClockParentDSEntry 1 }

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

ptpbaseClockParentDSInstanceIndex 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."
    ::= { ptpbaseClockParentDSEntry 3 }

ptpbaseClockParentDSParentPortIdentity 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]"
```

```
::= { ptptimeClockParentDSEntry 4 }
```

```
ptpbaseClockParentDSParentStats OBJECT-TYPE
  SYNTAX          TruthValue
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the Parent Dataset 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 Parent Dataset
     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
[IEEE 1588-2008]"
 ::= { ptpbaseClockParentDSEntry 6 }

```
ptpbaseClockParentDSClockPhChRate OBJECT-TYPE
  SYNTAX          Integer32
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the clock's parent dataset
     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 }

```
ptpbaseClockParentDSGMClockIdentity OBJECT-TYPE
```

SYNTAX

PtpClockIdentity

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MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "This object specifies the parent dataset Grandmaster clock identity."
REFERENCE
 [Section 8.2.3.6](#) parentDS.grandmasterIdentity of
 [IEEE 1588-2008]"
 ::= { ptptimeClockParentDSEntry 8 }

ptptimeClockParentDSGMClockPriority1 OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "This object specifies the parent dataset Grandmaster clock priority1."
REFERENCE
 [Section 8.2.3.8](#) parentDS.grandmasterPriority1 of
 [IEEE 1588-2008]"
 ::= { ptptimeClockParentDSEntry 9 }

ptptimeClockParentDSGMClockPriority2 OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
 "This object specifies the parent dataset grandmaster clock priority2."
REFERENCE
 [Section 8.2.3.9](#) parentDS.grandmasterPriority2 of
 [IEEE 1588-2008]"
 ::= { ptptimeClockParentDSEntry 10 }

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

ptptimeClockParentDSGMClockQualityAccuracy OBJECT-TYPE
SYNTAX PtpClockQualityAccuracyType

MAX-ACCESS read-only

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STATUS current
DESCRIPTION "This object specifies the parent dataset grandmaster clock quality accuracy."
REFERENCE "[Section 8.2.3.7](#) parentDS.grandmasterClockQuality of [IEEE 1588-2008]"
 ::= { ptptimeClockParentDSEEntry 12 }

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

ptptimeClockDefaultDSTable OBJECT-TYPE
SYNTAX SEQUENCE OF PtpbaseClockDefaultDSEEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "Table of information about the PTP clock Default Datasets for all domains."
 ::= { ptptimeMIBClockInfo 3 }

ptptimeClockDefaultDSEEntry OBJECT-TYPE
SYNTAX PtpbaseClockDefaultDSEEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "An entry in the table, containing information about a single PTP clock Default Datasets for a domain."
INDEX {
 ptptimeClockDefaultDSDomainIndex,
 ptptimeClockDefaultDSClockTypeIndex,
 ptptimeClockDefaultDSInstanceIndex
}
 ::= { ptptimeClockDefaultDSTable 1 }

PtpbaseClockDefaultDSEEntry ::= SEQUENCE {
 ptptimeClockDefaultDSDomainIndex 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 }
```

`ptpbaseClockDefaultDSClockIdentity OBJECT-TYPE`

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```
SYNTAX          PtpClockIdentity
MAX-ACCESS     read-only
STATUS         current
DESCRIPTION
  "This object specifies the default Datasets clock identity."
 ::= { ptptimeClockDefaultDSEntry 5 }

ptptimeClockDefaultDSPriority1 OBJECT-TYPE
  SYNTAX          Unsigned32
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the default Datasets clock Priority1."
 ::= { ptptimeClockDefaultDSEntry 6 }

ptptimeClockDefaultDSPriority2 OBJECT-TYPE
  SYNTAX          Unsigned32
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the default Datasets clock Priority2."
 ::= { ptptimeClockDefaultDSEntry 7 }

ptptimeClockDefaultDSSlaveOnly OBJECT-TYPE
  SYNTAX          TruthValue
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "Whether the SlaveOnly flag is set."
 ::= { ptptimeClockDefaultDSEntry 8 }

ptptimeClockDefaultDSQualityClass OBJECT-TYPE
  SYNTAX          PtpClockQualityClassType
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the default dataset Quality Class."
 ::= { ptptimeClockDefaultDSEntry 9 }

ptptimeClockDefaultDSQualityAccuracy OBJECT-TYPE
  SYNTAX          PtpClockQualityAccuracyType
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object specifies the default dataset Quality Accuracy."
 ::= { ptptimeClockDefaultDSEntry 10 }

ptptimeClockDefaultDSQualityOffset OBJECT-TYPE
```

SYNTAX

Integer32

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```
MAX-ACCESS      read-only
STATUS         current
DESCRIPTION
  "This object specifies the default dataset Quality offset."
 ::= { ptptimeClockDefaultDSEntry 11 }

ptptimeClockRunningTable OBJECT-TYPE
 SYNTAX          SEQUENCE OF PtptimeClockRunningEntry
 MAX-ACCESS     not-accessible
 STATUS         current
 DESCRIPTION
  "Table of information about the PTP clock Running Datasets for
 all domains."
 ::= { ptptimeMIBClockInfo 4 }

ptptimeClockRunningEntry OBJECT-TYPE
 SYNTAX          PtptimeClockRunningEntry
 MAX-ACCESS     not-accessible
 STATUS         current
 DESCRIPTION
  "An entry in the table, containing information about a single
 PTP clock running Datasets for a domain."
 INDEX          {
                  ptptimeClockRunningDomainIndex,
                  ptptimeClockRunningClockTypeIndex,
                  ptptimeClockRunningInstanceIndex
                }
 ::= { ptptimeClockRunningTable 1 }

PtptimeClockRunningEntry ::= SEQUENCE {
  ptptimeClockRunningDomainIndex    PtpClockDomainType,
  ptptimeClockRunningClockTypeIndex PtpClockType,
  ptptimeClockRunningInstanceIndex  PtpClockInstanceType,
  ptptimeClockRunningState        PtpClockStateType,
  ptptimeClockRunningPacketsSent   Counter64,
  ptptimeClockRunningPacketsReceived Counter64
}

ptptimeClockRunningDomainIndex 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."
 ::= { ptptimeClockRunningEntry 1 }
```



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

ptpbaseClockRunningInstanceIndex 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."
    ::= { ptpbaseClockRunningEntry 3 }

ptpbaseClockRunningState OBJECT-TYPE
    SYNTAX          PtpClockStateType
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "This object specifies the Clock state returned by a PTP
engine."
    ::= { ptpbaseClockRunningEntry 4 }

ptpbaseClockRunningPacketsSent 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."
    ::= { ptpbaseClockRunningEntry 5 }

ptpbaseClockRunningPacketsReceived 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."
    ::= { ptpbaseClockRunningEntry 6 }
```



```
ptpbaseClockTimePropertiesDSTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbaseClockTimePropertiesDSEntry
    MAX-ACCESS     not-accessible
    STATUS         current
    DESCRIPTION
        "Table of information about the PTP clock time properties
         datasets for all domains."
    ::= { ptpbaseMIBClockInfo 5 }

ptpbaseClockTimePropertiesDSEntry OBJECT-TYPE
    SYNTAX          PtpbaseClockTimePropertiesDSEntry
    MAX-ACCESS     not-accessible
    STATUS         current
    DESCRIPTION
        "An entry in the table, containing information about a single
         PTP clock timeproperties Datasets for a domain."
    REFERENCE
        "Section 8.2.4 timePropertiesDS data set member specifications
         of [IEEE 1588-2008]"
    INDEX          {
                    ptpbaseClockTimePropertiesDSDomainIndex,
                    ptpbaseClockTimePropertiesDSClockTypeIndex,
                    ptpbaseClockTimePropertiesDSInstanceIndex
                }
    ::= { ptpbaseClockTimePropertiesDSTable 1 }

PtpbaseClockTimePropertiesDSEntry ::= SEQUENCE {
    ptpbaseClockTimePropertiesDSDomainIndex          PtpClockDomainType,
    ptpbaseClockTimePropertiesDSClockTypeIndex       PtpClockType,
    ptpbaseClockTimePropertiesDSInstanceIndex
    PtpClockInstanceType,
    ptpbaseClockTimePropertiesDSCurrentUTCoffsetValid TruthValue,
    ptpbaseClockTimePropertiesDSCurrentUTCoffset      Integer32,
    ptpbaseClockTimePropertiesDSLeap59                 TruthValue,
    ptpbaseClockTimePropertiesDSLeap61                 TruthValue,
    ptpbaseClockTimePropertiesDSTimeTraceable        TruthValue,
    ptpbaseClockTimePropertiesDSFreqTraceable        TruthValue,
    ptpbaseClockTimePropertiesDSPTPTimescale         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."
 ::= { ptptimePropertiesDSEntry 1 }

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

ptptimePropertiesDSInstanceIndex 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."
 ::= { ptptimePropertiesDSEntry 3 }

ptptimePropertiesDSCurrentUTCoffsetValid OBJECT-TYPE
    SYNTAX          TruthValue
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the timeproperties dataset value of
        whether the current UTC offset is valid."
    REFERENCE
        "Section 8.2.4.2 timePropertiesDS.currentUtcOffset of
        [IEEE 1588-2008]"
 ::= { ptptimePropertiesDSEntry 4 }

ptptimePropertiesDSCurrentUTCoffset OBJECT-TYPE
    SYNTAX          Integer32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the timeproperties dataset 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]"
 ::= { ptptimePropertiesDSEntry 5 }

ptptimePropertiesDSLeap59 OBJECT-TYPE
 SYNTAX          TruthValue
 MAX-ACCESS      read-only
 STATUS          current
 DESCRIPTION
   "This object specifies the Leap59 value in the clock Current
    Dataset."
REFERENCE
   "Section 8.2.4.4 timePropertiesDS.leap59 of [IEEE 1588-2008]"
 ::= { ptptimePropertiesDSEntry 6 }

ptptimePropertiesDSLeap61 OBJECT-TYPE
 SYNTAX          TruthValue
 MAX-ACCESS      read-only
 STATUS          current
 DESCRIPTION
   "This object specifies the Leap61 value in the clock Current
    Dataset."
REFERENCE
   "Section 8.2.4.5 timePropertiesDS.leap61 of [IEEE 1588-2008]"
 ::= { ptptimePropertiesDSEntry 7 }

ptptimePropertiesDSTimeTraceable OBJECT-TYPE
 SYNTAX          TruthValue
 MAX-ACCESS      read-only
 STATUS          current
 DESCRIPTION
   "This object specifies the Time Traceable value in the clock
    Current Dataset."
REFERENCE
   "Section 8.2.4.6 timePropertiesDS.timeTraceable of
    [IEEE 1588-2008]"
 ::= { ptptimePropertiesDSEntry 8 }

ptptimePropertiesDSFreqTraceable OBJECT-TYPE
 SYNTAX          TruthValue
 MAX-ACCESS      read-only
 STATUS          current
 DESCRIPTION
   "This object specifies the Frequency Traceable value in the
    clock Current Dataset."
REFERENCE
   "Section 8.2.4.7 timePropertiesDS.frequencyTraceable of
    [IEEE 1588-2008]"
 ::= { ptptimePropertiesDSEntry 9 }
```



```
ptpbaseClockTimePropertiesDSPTPTimescale OBJECT-TYPE
    SYNTAX          TruthValue
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "This object specifies the PTP Timescale value in the clock
        Current Dataset."
    REFERENCE
        "Section 8.2.4.8 timePropertiesDS.ptpTimescale of
        [IEEE 1588-2008]"
    ::= { ptpbaseClockTimePropertiesDSEntry 10 }

ptpbaseClockTimePropertiesDSSource OBJECT-TYPE
    SYNTAX          PtpClockTimeSourceType
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "This object specifies the Timesource value in the clock Current
        Dataset."
    REFERENCE
        "Section 8.2.4.9 timePropertiesDS.timeSource of
        [IEEE 1588-2008]"
    ::= { ptpbaseClockTimePropertiesDSEntry 11 }

ptpbaseClockTransDefaultDSTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF PtpbaseClockTransDefaultDSEntry
    MAX-ACCESS     not-accessible
    STATUS         current
    DESCRIPTION
        "Table of information about the PTP Transparent clock Default
        Datasets for all domains."
    ::= { ptpbaseMIBClockInfo 6 }

ptpbaseClockTransDefaultDSEntry OBJECT-TYPE
    SYNTAX          PtpbaseClockTransDefaultDSEntry
    MAX-ACCESS     not-accessible
    STATUS         current
    DESCRIPTION
        "An entry in the table, containing information about a single
        PTP Transparent clock Default Datasets for a domain."
    REFERENCE
        "Section 8.3.2 transparentClockDefaultDS data set member
        specifications of [IEEE 1588-2008]"
    INDEX           {
                    ptpbaseClockTransDefaultDSDomainIndex,
                    ptpbaseClockTransDefaultDSInstanceIndex
                }
```

}

```
 ::= { ptptimeTransDefaultDSTable 1 }

PtpbaseClockTransDefaultDSEntry ::= SEQUENCE {
    ptptimeClockTransDefaultDSDomainIndex    PtpClockDomainType,
    ptptimeClockTransDefaultDSInstanceIndex   PtpClockInstanceType,
    ptptimeClockTransDefaultDSClockIdentity  PtpClockIdentity,
    ptptimeClockTransDefaultDSNumOfPorts     Counter32,
    ptptimeClockTransDefaultDSDelay          PtpClockMechanismType,
    ptptimeClockTransDefaultDSPrimaryDomain PtpClockDomainType
}

ptptimeClockTransDefaultDSDomainIndex 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."
    ::= { ptptimeClockTransDefaultDSEntry 1 }

ptptimeClockTransDefaultDSInstanceIndex 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."
    ::= { ptptimeClockTransDefaultDSEntry 2 }

ptptimeClockTransDefaultDSClockIdentity 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]"
    ::= { ptptimeClockTransDefaultDSEntry 3 }

ptptimeClockTransDefaultDSNumOfPorts 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]"
 ::= { ptptimeClockTransDefaultDSEntry 4 }

ptptimeClockTransDefaultDSDelay 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
shall be P2P."

REFERENCE

"[Section 8.3.2.3.1](#) transparentClockDefaultDS.delayMechanism of
[IEEE 1588-2008]"
 ::= { ptptimeClockTransDefaultDSEntry 5 }

ptptimeClockTransDefaultDSPrimaryDomain OBJECT-TYPE

SYNTAX PtpClockDomainType
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"This object specifies the value of the primary syntonization
domain. The initialization value shall be 0."

REFERENCE

"[Section 8.3.2.3.2](#) transparentClockDefaultDS.primaryDomain of
[IEEE 1588-2008]"
 ::= { ptptimeClockTransDefaultDSEntry 6 }

ptptimeClockPortTable OBJECT-TYPE

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

DESCRIPTION

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

::= { ptptimeMIBClockInfo 7 }

ptptimeClockPortEntry OBJECT-TYPE

SYNTAX PtpbaseClockPortEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"An entry in the table, containing information about a single

```
    clock port."
INDEX      {
    ptpbaseClockPortDomainIndex,
    ptpbaseClockPortClockTypeIndex,
    ptpbaseClockPortClockInstanceIndex,
    ptpbaseClockPortTablePortNumberIndex
}
 ::= { ptpbaseClockPortTable 1 }

PtpbaseClockPortEntry ::= SEQUENCE {
    ptpbaseClockPortDomainIndex          PtpClockDomainType,
    ptpbaseClockPortClockTypeIndex       PtpClockType,
    ptpbaseClockPortClockInstanceIndex   PtpClockInstanceType,
    ptpbaseClockPortTablePortNumberIndex PtpClockPortNumber,
    ptpbaseClockPortName                DisplayString,
    ptpbaseClockPortRole                PtpClockRoleType,
    ptpbaseClockPortSyncTwoStep         TruthValue,
    ptpbaseClockPortCurrentPeerAddressType AutonomousType,
    ptpbaseClockPortCurrentPeerAddress
PtpClockPortTransportTypeAddress,
    ptpbaseClockPortNumOfAssociatedPorts Gauge32
}

ptpbaseClockPortDomainIndex 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."
 ::= { ptpbaseClockPortEntry 1 }

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

ptpbaseClockPortClockInstanceIndex 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."
```

```
::= { ptptimeClockPortEntry 3 }
```

```
ptpbaseClockPortTablePortNumberIndex OBJECT-TYPE
  SYNTAX          PtpClockPortNumber
  MAX-ACCESS     not-accessible
  STATUS         current
  DESCRIPTION
    "This object specifies the PTP Portnumber for this port."
  ::= { ptpbaseClockPortEntry 4 }

ptpbaseClockPortName 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."
  ::= { ptpbaseClockPortEntry 5 }

ptpbaseClockPortRole OBJECT-TYPE
  SYNTAX          PtpClockRoleType
  MAX-ACCESS     read-only
  STATUS         current
  DESCRIPTION
    "This object describes the current role (slave/master) of the
     port."
  ::= { ptpbaseClockPortEntry 6 }

ptpbaseClockPortSyncTwoStep 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

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DESCRIPTION

"This object specifies the current peer's network address used for PTP communication."
 ::= { ptptimePeerAddress 9 }

ptpbaseClockPortNumOfAssociatedPorts OBJECT-TYPE

SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"This object specifies -
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)."
 ::= { ptptimePeerAddress 10 }

ptpbaseClockPortDSTable OBJECT-TYPE

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

DESCRIPTION

"Table of information about the clock ports dataset for a particular domain."
 ::= { ptptimeClockPortDS 8 }

ptpbaseClockPortDSEntry OBJECT-TYPE

SYNTAX PtpbaseClockPortDSEntry
MAX-ACCESS not-accessible
STATUS current

DESCRIPTION

"An entry in the table, containing port dataset information for a single clock port."

INDEX {
 ptpbaseClockPortDSDomainIndex,
 ptpbaseClockPortDSClockTypeIndex,
 ptpbaseClockPortDSClockInstanceIdIndex,
 ptpbaseClockPortDSPortNumberIndex
 }
 ::= { ptptimeClockPortDS 1 }

PtpbaseClockPortDSEntry ::= SEQUENCE {

 ptpbaseClockPortDSDomainIndex PtpClockDomainType,
 ptpbaseClockPortDSClockTypeIndex PtpClockType,
 ptpbaseClockPortDSClockInstanceIdIndex PtpClockInstanceType,
 ptpbaseClockPortDSPortNumberIndex PtpClockPortNumber,

`ptpbaseClockPortDSName`

`DisplayString,`

```
    ptpbaseClockPortDSPortIdentity      OCTET STRING,
    ptpbaseClockPortDSlogAnnouncementInterval PtpClockIntervalBase2,
    ptpbaseClockPortDSAnnounceRctTimeout   Integer32,
    ptpbaseClockPortDSlogSyncInterval     PtpClockIntervalBase2,
    ptpbaseClockPortDSMinDelayReqInterval Integer32,
    ptpbaseClockPortDSPeerDelayReqInterval Integer32,
    ptpbaseClockPortDSDelayMech          PtpClockMechanismType,
    ptpbaseClockPortDSPeerMeanPathDelay  PtpClockTimeInterval,
    ptpbaseClockPortDSGrantDuration     Unsigned32,
    ptpbaseClockPortDSPTPVersion        Unsigned32
}

ptpbaseClockPortDSDomainIndex 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."
  ::= { ptpbaseClockPortDSEntry 1 }

ptpbaseClockPortDSClockTypeIndex 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`

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```
SYNTAX          DisplayString (SIZE (1..64))
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION
    "This object specifies the PTP clock port dataset name."
::= { ptptimeClockPortDSEntry 5 }

ptptimeClockPortDSIdentity OBJECT-TYPE
    SYNTAX          OCTET STRING(SIZE(1..256))
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the PTP clock port Identity."
    ::= { ptptimeClockPortDSEntry 6 }

ptptimeClockPortDSlogAnnouncementInterval 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."
    ::= { ptptimeClockPortDSEntry 7 }

ptptimeClockPortDSAnnounceRctTimeout OBJECT-TYPE
    SYNTAX          Integer32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the Announce receipt timeout associated
         with this clock port."
    ::= { ptptimeClockPortDSEntry 8 }

ptptimeClockPortDSlogSyncInterval OBJECT-TYPE
    SYNTAX          PtpClockIntervalBase2
    UNITS           "Time Interval"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the Sync message transmission interval."
    ::= { ptptimeClockPortDSEntry 9 }

ptptimeClockPortDSMinDelayReqInterval OBJECT-TYPE
    SYNTAX          Integer32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
```

"This object specifies the Delay_Req message transmission

```
        interval."
 ::= { ptptimeSyncClockPortDSEntry 10 }

ptptimeSyncClockPortDSPeerDelayReqInterval OBJECT-TYPE
    SYNTAX          Integer32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the Pdelay_Req message transmission
         interval."
 ::= { ptptimeSyncClockPortDSEntry 11 }

ptptimeSyncClockPortDSDelayMech 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 of the is e2e, else if the
         clock is a peer to-peer clock, the value shall be p2p."
 ::= { ptptimeSyncClockPortDSEntry 12 }

ptptimeSyncClockPortDSPeerMeanPathDelay OBJECT-TYPE
    SYNTAX          PtpClockTimeInterval
    UNITS           "Time Interval"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the peer meanPathDelay."
 ::= { ptptimeSyncClockPortDSEntry 13 }

ptptimeSyncClockPortDSGrantDuration OBJECT-TYPE
    SYNTAX          Unsigned32
    UNITS           "seconds"
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the grant duration allocated by the
         master."
 ::= { ptptimeSyncClockPortDSEntry 14 }

ptptimeSyncClockPortDSPTPVersion OBJECT-TYPE
    SYNTAX          Unsigned32
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
        "This object specifies the PTP version being used."
 ::= { ptptimeSyncClockPortDSEntry 15 }
```



```
ptpbaseClockPortRunningTable OBJECT-TYPE
  SYNTAX          SEQUENCE OF PtpbaseClockPortRunningEntry
  MAX-ACCESS     not-accessible
  STATUS         current
  DESCRIPTION
    "Table of information about the clock ports running datasets for
     a particular domain."
 ::= { ptpbaseMIBClockInfo 9 }

ptpbaseClockPortRunningEntry OBJECT-TYPE
  SYNTAX          PtpbaseClockPortRunningEntry
  MAX-ACCESS     not-accessible
  STATUS         current
  DESCRIPTION
    "An entry in the table, containing 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

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```
logical group of PTP devices."
 ::= { ptptimeClockPortRunningEntry 1 }

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

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

ptptimeClockPortRunningPortNumberIndex OBJECT-TYPE
 SYNTAX          PtpClockPortNumber
 MAX-ACCESS      not-accessible
 STATUS          current
 DESCRIPTION
   "This object specifies the PTP portnumber associated with this
   clock port."
 ::= { ptptimeClockPortRunningEntry 4 }

ptptimeClockPortRunningName OBJECT-TYPE
 SYNTAX          DisplayString (SIZE (1..64))
 MAX-ACCESS      read-only
 STATUS          current
 DESCRIPTION
   "This object specifies the PTP clock port name."
 ::= { ptptimeClockPortRunningEntry 5 }

ptptimeClockPortRunningState 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      "
 ::= { ptptimeClockPortRunningEntry 6 }

ptptimeClockPortRunningRole OBJECT-TYPE
    SYNTAX          PtpClockRoleType
    MAX-ACCESS     read-only
    STATUS         current
    DESCRIPTION
        "This object specifies the Clock Role."
    ::= { ptptimeClockPortRunningEntry 7 }

ptptimeClockPortRunningInterfaceIndex 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."
    ::= { ptptimeClockPortRunningEntry 8 }

ptptimeClockPortRunningTransport 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)."
    ::= { ptptimeClockPortRunningEntry 9 }

ptptimeClockPortRunningEncapsulationType 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, Pseudowire
        encapsulation...) for the PTP messages."
    ::= { ptptimeClockPortRunningEntry 10 }

ptptimeClockPortRunningTxMode 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"  
 ::= { ptptimeClockPortRunningEntry 11 }  
  
ptptimeClockPortRunningRxMode 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"  
 ::= { ptptimeClockPortRunningEntry 12 }  
  
ptptimeClockPortRunningPacketsReceived 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."  
 ::= { ptptimeClockPortRunningEntry 13 }  
  
ptptimeClockPortRunningPacketsSent 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."  
 ::= { ptptimeClockPortRunningEntry 14 }  
  
  
ptptimeClockPortTransDSTable OBJECT-TYPE  
  SYNTAX          SEQUENCE OF PtpClockPortTransDSEntry  
  MAX-ACCESS     not-accessible  
  STATUS         current  
  DESCRIPTION  
    "Table of information about the Transparent clock ports running  
     dataset for a particular domain."  
 ::= { ptptimeMIBClockInfo 10 }
```



```
ptpbaseClockPortTransDSEntry OBJECT-TYPE
    SYNTAX          PtpbaseClockPortTransDSEntry
    MAX-ACCESS     not-accessible
    STATUS         current
    DESCRIPTION
        "An entry in the table, containing 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 port number associated with this
```

port."

REFERENCE "[Section 7.5.2](#) Port Identity of [IEEE 1588-2008]"
 ::= { ptptimeClockPortTransDSEntry 3 }

ptptimeClockPortTransDSportIdentity 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]"
 ::= { ptptimeClockPortTransDSEntry 4 }

ptptimeClockPortTransDSlogMinPdelayReqInt 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]"
 ::= { ptptimeClockPortTransDSEntry 5 }

ptptimeClockPortTransDSFaultyFlag 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]"
 ::= { ptptimeClockPortTransDSEntry 6 }

ptptimeClockPortTransDSPeerMeanPathDelay 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]"

::= { ptptimeClockPortTransDSEntry 7 }

ptptimeClockPortAssociateTable OBJECT-TYPE

SYNTAX SEQUENCE OF PtptimeClockPortAssociateEntry

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."

::= { ptptimeMIBClockInfo 11 }

--

-- Well Known transport types for PTP communication.

--

ptptimeWellKnownTransportTypes OBJECT IDENTIFIER ::= {
ptptimeMIBClockInfo 12 }

ptptimeTransportTypeIPversion4 OBJECT-IDENTITY

STATUS current

DESCRIPTION

"IP version 4"

::= { ptptimeWellKnownTransportTypes 1 }

ptptimeTransportTypeIPversion6 OBJECT-IDENTITY

STATUS current

DESCRIPTION

"IP version 6"

::= { ptptimeWellKnownTransportTypes 2 }

ptptimeTransportTypeEthernet OBJECT-IDENTITY

STATUS current

DESCRIPTION

"Ethernet"

::= { ptptimeWellKnownTransportTypes 3 }


```
ptpbaseTransportTypeDeviceNET OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "Device NET"
    ::= { ptpbaseWellKnownTransportTypes 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 }

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

ptpbaseEncapsulationTypePWUDPIPPLSP OBJECT-IDENTITY
    STATUS current
    DESCRIPTION
        "UDP/IP Pseudowire over MPLS Encapsulation type."
```



```
 ::= { ptptimeWellKnownEncapsulationTypes 4 }

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

ptptimeClockPortAssociateEntry OBJECT-TYPE
  SYNTAX          PtpbaseClockPortAssociateEntry
  MAX-ACCESS     not-accessible
  STATUS         current
  DESCRIPTION
    "An entry in the table, containing information about a single
     associated port for the given clockport."
  INDEX          {
    ptpClockPortCurrentDomainIndex,
    ptpClockPortCurrentClockTypeIndex,
    ptpClockPortCurrentClockInstanceId,
    ptpClockPortCurrentPortNumberIndex,
    ptptimeClockPortAssociatePortIndex
  }
  ::= { ptptimeClockPortAssociateTable 1 }

PtpbaseClockPortAssociateEntry ::= SEQUENCE {
  ptpClockPortCurrentDomainIndex          PtpClockDomainType,
  ptpClockPortCurrentClockTypeIndex       PtpClockType,
  ptpClockPortCurrentClockInstanceId     PtpClockInstanceType,
  ptpClockPortCurrentPortNumberIndex      PtpClockPortNumber,
  ptptimeClockPortAssociatePortIndex      Unsigned32,
  ptptimeClockPortAssociateAddressType    AutonomousType,
  ptptimeClockPortAssociateAddress
  PtpClockPortTransportTypeAddress,
  ptptimeClockPortAssociatePacketsSent    Counter64,
  ptptimeClockPortAssociatePacketsReceived Counter64,
  ptptimeClockPortAssociateInErrors       Counter64,
  ptptimeClockPortAssociateOutErrors      Counter64
}

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

ptpbaseClockPortAssociateAddress OBJECT-TYPE
  SYNTAX          PtpClockPortTransportTypeAddress
  MAX-ACCESS     read-only
```

STATUS

current

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DESCRIPTION

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

`::= { ptptimeClockPortAssociateEntry 7 }`

ptpbaseClockPortAssociatePacketsSent 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."

`::= { ptptimeClockPortAssociateEntry 8 }`

ptpbaseClockPortAssociatePacketsReceived 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."

`::= { ptptimeClockPortAssociateEntry 9 }`

ptpbaseClockPortAssociateInErrors 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."

`::= { ptptimeClockPortAssociateEntry 10 }`

ptpbaseClockPortAssociateOutErrors 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."

`::= { ptptimeClockPortAssociateEntry 11 }`

ptpbaseMIBCompliances OBJECT IDENTIFIER

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```
 ::= { ptptimeSync 1 }

ptptimeSync OBJECT IDENTIFIER
 ::= { ptptimeSync 2 }

ptptimeSyncCompliance 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 { ptptimeSyncSystemInfoGroup }
 ::= { ptptimeSyncCompliance 1 }

ptptimeSyncClockInfo 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 {
                  ptptimeSyncClockCurrentDSGroup,
                  ptptimeSyncClockParentDSGroup,
                  ptptimeSyncClockDefaultDSGroup,
                  ptptimeSyncClockRunningGroup,
                  ptptimeSyncClockTimePropertiesGroup
                }
 ::= { ptptimeSyncCompliance 2 }

ptptimeSyncClockPortInfo 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 {

- ptpbaseMIBClockPortGroup,
- ptpbaseMIBClockPortDSGroup,
- ptpbaseMIBClockPortRunningGroup,
- ptpbaseMIBClockPortAssociateGroup

}

::= { ptpbaseMIBCompliances 3 }

ptpbaseMIBCompliancesTransparentClockInfo 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 {

- ptpbaseMIBClockTranparentDSGroup,
- ptpbaseMIBClockPortTransDSGroup

}

::= { ptpbaseMIBCompliances 4 }

ptpbaseMIBSystemInfoGroup OBJECT-GROUP

OBJECTS {

- ptpbaseSystemDomainTotals,
- ptpDomainClockPortsTotal,
- ptpbaseSystemProfile

}

STATUS current

DESCRIPTION

"Group which aggregates objects describing system-wide information"

::= { ptpbaseMIBGroups 1 }

ptpbaseMIBClockCurrentDSGroup OBJECT-GROUP

OBJECTS {

- ptpbaseClockCurrentDSStepsRemoved,
- ptpbaseClockCurrentDSOffsetFromMaster,
- ptpbaseClockCurrentDSMeanPathDelay

}

STATUS current

DESCRIPTION

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```
"Group which aggregates objects describing PTP Current Dataset
information"
 ::= { ptptimeMIBGroups 2 }

ptptimeMIBClockParentDSGroup OBJECT-GROUP
OBJECTS {
    ptptimeClockParentDSParentPortIdentity,
    ptptimeClockParentDSParentStats,
    ptptimeClockParentDSOffset,
    ptptimeClockParentDSClockPhChRate,
    ptptimeClockParentDSGMClockIdentity,
    ptptimeClockParentDSGMClockPriority1,
    ptptimeClockParentDSGMClockPriority2,
    ptptimeClockParentDSGMClockQualityClass,
    ptptimeClockParentDSGMClockQualityAccuracy,
    ptptimeClockParentDSGMClockQualityOffset
}
STATUS current
DESCRIPTION
"Group which aggregates objects describing PTP Parent Dataset
information"
 ::= { ptptimeMIBGroups 3 }

ptptimeMIBClockDefaultDSGroup OBJECT-GROUP
OBJECTS {
    ptptimeClockDefaultDSTwoStepFlag,
    ptptimeClockDefaultDSClockIdentity,
    ptptimeClockDefaultDSPriority1,
    ptptimeClockDefaultDSPriority2,
    ptptimeClockDefaultDSSlaveOnly,
    ptptimeClockDefaultDSQualityClass,
    ptptimeClockDefaultDSQualityAccuracy,
    ptptimeClockDefaultDSQualityOffset
}
STATUS current
DESCRIPTION
"Group which aggregates objects describing PTP Default Dataset
information"
 ::= { ptptimeMIBGroups 4 }

ptptimeMIBClockRunningGroup OBJECT-GROUP
OBJECTS {
    ptptimeClockRunningState,
    ptptimeClockRunningPacketsSent,
    ptptimeClockRunningPacketsReceived
}
STATUS current
DESCRIPTION
```

"Group which aggregates objects describing PTP running state

```
        information"
 ::= { ptptimeProperties 5 }

ptptimeProperties OBJECT-GROUP
OBJECTS {
    ptptimeCurrentUTCOffsetValid,
    ptptimeCurrentUTCOffset,
    ptptimeLeap59,
    ptptimeLeap61,
    ptptimeDSTimeTraceable,
    ptptimeFreqTraceable,
    ptptimePTPTimescale,
    ptptimeDSSource
}
STATUS current
DESCRIPTION
"Group which aggregates objects describing PTP Time Properties
information"
 ::= { ptptimeGroups 6 }

ptptimeTransparentDSGroup OBJECT-GROUP
OBJECTS {
    ptptimeTransDefaultClockIdentity,
    ptptimeTransDefaultNumOfPorts,
    ptptimeTransDefaultDelay,
    ptptimeTransDefaultPrimaryDomain
}
STATUS current
DESCRIPTION
"Group which aggregates objects describing PTP Transparent
Dataset
information"
 ::= { ptptimeGroups 7 }

ptptimeClockPortGroup OBJECT-GROUP
OBJECTS {
    ptptimeClockPortName,
    ptptimeClockPortSyncTwoStep,
    ptptimeClockPortCurrentPeerAddress,
    ptptimeClockPortNumOfAssociatedPorts,
    ptptimeClockPortCurrentPeerAddressType,
    ptptimeClockPortRole
}
STATUS current
DESCRIPTION
"Group which aggregates objects describing information for a
given PTP Port."
 ::= { ptptimeGroups 8 }
```



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

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

ptpbaseMIBClockPortTransDSGroup OBJECT-GROUP
OBJECTS      {
                  ptpbaseClockPortTransDSPortIdentity,
                  ptpbaseClockPortTransDSlogMinPdelayReqInt,
                  ptpbaseClockPortTransDSFaultyFlag,
                  ptpbaseClockPortTransDSPeerMeanPathDelay
}
STATUS        current
DESCRIPTION
```

"Group which aggregates objects describing PTP TransparentDS

```
        information"
 ::= { ptptimeMIBGroups 11 }

ptptimeMIBClockPortAssociateGroup OBJECT-GROUP
OBJECTS      {
    ptptimeClockPortAssociatePacketsSent,
    ptptimeClockPortAssociatePacketsReceived,
    ptptimeClockPortAssociateAddress,
    ptptimeClockPortAssociateAddressType,
    ptptimeClockPortAssociateInErrors,
    ptptimeClockPortAssociateOutErrors
}
STATUS       current
DESCRIPTION
    "Group which aggregates objects describing information on peer
     PTP ports for a given PTP clock-port."
 ::= { ptptimeMIBGroups 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.

The following objects all have a MAX-ACCESS of read-only:

```
ptptimeDomainClockPortsTotal,
ptptimeSystemDomainTotals,
ptptimeSystemProfile expose general information about the clock
system.

ptptimeClockRunningState,
ptptimeClockRunningPacketsSent,
ptptimeClockRunningPacketsReceived expose a clock's current running
status.

ptptimeClockCurrentDSStepsRemoved,
```


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

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

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

`ptpbaseClockTimePropertiesDSCurrentUTCOffsetValid,`
`ptpbaseClockTimePropertiesDSCurrentUTCOffset,`
`ptpbaseClockTimePropertiesDSLeap59,`
`ptpbaseClockTimePropertiesDSLeap61,`
`ptpbaseClockTimePropertiesDSTimeTraceable,`
`ptpbaseClockTimePropertiesDSFreqTraceable,`
`ptpbaseClockTimePropertiesDSPTPTimescale,`
`ptpbaseClockTimePropertiesDSSource` expose the values of a clock's
time properties dataset (timePropertiesDS).

`ptpbaseClockTransDefaultDSClockIdentity,`
`ptpbaseClockTransDefaultDSNumOfPorts,`
`ptpbaseClockTransDefaultDSDelay,`
`ptpbaseClockTransDefaultDSPrimaryDomain` expose the values of a
transparent clock's default dataset (transparentClockDefaultDS).

`ptpbaseClockPortName,`
`ptpbaseClockPortRole,`
`ptpbaseClockPortSyncTwoStep,`
`ptpbaseClockPortCurrentPeerAddressType,`
`ptpbaseClockPortCurrentPeerAddress,`
`ptpbaseClockPortNumOfAssociatedPorts` expose general information

about a clock port.

`ptpbaseClockPortRunningName,`
`ptpbaseClockPortRunningState,`
`ptpbaseClockPortRunningRole,`
`ptpbaseClockPortRunningInterfaceIndex,`
`ptpbaseClockPortRunningTransport,`
`ptpbaseClockPortRunningEncapsulationType,`
`ptpbaseClockPortRunningTxMode,`
`ptpbaseClockPortRunningRxMode,`
`ptpbaseClockPortRunningPacketsReceived,`
`ptpbaseClockPortRunningPacketsSent` expose a clock port's current running status.

`ptpbaseClockPortDSName,`
`ptpbaseClockPortDSPortIdentity,`
`ptpbaseClockPortDSlogAnnouncementInterval,`
`ptpbaseClockPortDSAnnounceRctTimeout,`
`ptpbaseClockPortDSlogSyncInterval,`
`ptpbaseClockPortDSMinDelayReqInterval,`
`ptpbaseClockPortDSPeerDelayReqInterval,`
`ptpbaseClockPortDSDelayMech,`
`ptpbaseClockPortDSPeerMeanPathDelay,`
`ptpbaseClockPortDSGrantDuration,`
`ptpbaseClockPortDSPTPVersion` expose the values of a clock port's port dataset (portDS).

`ptpbaseClockPortTransDSPortIdentity,`
`ptpbaseClockPortTransDSlogMinPdelayReqInt,`
`ptpbaseClockPortTransDSFaultyFlag,`
`ptpbaseClockPortTransDSPeerMeanPathDelay` expose the values of a transparent clock port's port dataset (transparentClockPortDS).

`ptpbaseClockPortAssociateAddressType,`
`ptpbaseClockPortAssociateAddress,`
`ptpbaseClockPortAssociatePacketsSent,`
`ptpbaseClockPortAssociatePacketsReceived,`
`ptpbaseClockPortAssociateInErrors,`
`ptpbaseClockPortAssociateOutErrors` 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 [[RFC 3410](#)]), and implementations claiming compliance to the SNMPv3 standard MUST include full support for authentication and privacy via the User-based Security Model (USM)

[[RFC 3414](#)] with the AES cipher algorithm [[RFC 3826](#)]. Implementations

MAY also provide support for the Transport Security Model (TSM) [[RFC 5591](#)] in combination with a secure transport such as SSH [[RFC 5592](#)] or TLS/DTLS [[RFC 6353](#)].

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 SMI Numbers registry:

Descriptor	OBJECT IDENTIFIER value
ptpbaseMIB	{ mib-2 xxx }

[NOTE for IANA: Please allocate an object identifier at <http://www.iana.org/assignments/smi-numbers> for object ptpbaseMIB.]

[7. References](#)

[7.1. Normative References](#)

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8. Acknowledgements

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