Previews for the next draft of P802.1ASdn

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About this Document
This document is an individual contribution in support of the comment resolution of P802.1ASdn/D2.0 in preparation of the subsequent draft of P802.1ASdn.
Replacement for Figure 17-1

```
ieee802-dot1as-ptp
  imports ieee1588-ptp
    PTP
      instances
        instance
          instance-index
            default-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            current-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            parent-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            path-trace-ds
              (members shared with 1588)
            time-properties-ds
              (members shared with 1588)
            acceptable-time-transmitter-ds
              (members shared with 1588)
            path-trace-ds
              (members specific to 802.1AS)
            acceptable-time-transmitter-ds
              (members specific to 802.1AS)
            parent-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            current-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            default-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            instance
              instance-index
            default-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            current-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            parent-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            path-trace-ds
              (members shared with 1588)
            time-properties-ds
              (members shared with 1588)
            acceptable-time-transmitter-ds
              (members shared with 1588)
            path-trace-ds
              (members specific to 802.1AS)
            acceptable-time-transmitter-ds
              (members specific to 802.1AS)
            parent-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            current-ds
              (members shared with 1588)
              (members specific to 802.1AS)
            default-ds
              (members shared with 1588)
              (members specific to 802.1AS)
```
Replacement for Figure 17-2

```plaintext
default-ds
  clock-identity clock-identity; // r
  uint16 number-ports; // r
  struct clock-quality; // r-w
  uint8 priority1; // r-w
  uint8 priority2; // r-w
  uint16 domain-number; // r-w
  bool instance-enable; // r-w
  bool external-port-config-enable; // r-w
  bool gm-capable; // r
  int16 current-utc-offset; // r
  bool leap59; // r
  bool leap61; // r
  bool time-traceable; // r
  bool ptp-timescale; // r
  time-source time-source; // r

parent-ds
  struct parent-port-identity; // r
  clock-identity grandmaster-identity; // r
  struct grandmaster-clock-quality; // r
  uint8 grandmaster-priority1; // r
  uint8 grandmaster-priority2; // r
  int32 cumulative-rate-ratio; // r

end-properties-ds
  int16 current-utc-offset; // r-w
  bool current-utc-offset-valid; // r-w
  bool leap59; // r-w
  bool leap61; // r-w
  bool time-traceable; // r-w
  bool frequency-traceable; // r-w
  bool ptp-timescale; // r-w
  time-source time-source; // r-w

path-trace-ds
  clock-identity *list; // r
  bool enable; // r-w

acceptable-time-transmitter-ds
  int16 max-table-size; // r
  struct *list r-w

instances
  instance
    instance-index

current-ds
  uint16 steps-removed; // r
  time-interval offset-from-time-transmitter; // r
  scaled-nanoseconds last-gm-phase-change; // r
  float64 last-gm-freq-change; // r
  uint16 gm-timebase-indicator; // r
  uint32 gm-change-count; // r
  timestamp time-of-last-gm-change; // r
  timestamp time-of-last-freq-change; // r
```

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Replacement for Figure 17-4

Replacement for the contents in 17.6 of P802.1ASdn-D2.0

With change indications (for review, not for replacement)

```yin
module ieee802-dotlas-gptp {
  yang-version "1.1";
  namespace urn:ieee:std:802.1AS:yang:ieee802-dotlas-gptp;
  prefix dotlas-gptp;

  import ietf-yang-types {
    prefix yang;
  }

  import ieeel588-ptp-ss {
    prefix ptp-ss;
  }

  organization
}
```
"IEEE 802.1 Working Group";

contact

"WG-URL: http://ieee802.org/1/
-WG-EMail: stds-802-1-l@ieee.org

Contact: IEEE 802.1 Working Group Chair
-- Postal: C/O IEEE 802.1 Working Group
  -- IEEE Standards Association
  -- 445 Hoes Lane
  -- Piscataway, NJ 08854
  -- USA

  -- E-mail: stds-802-1-chairs@ieee.org";

description

"Management objects that control timing and synchronization
  for time
  sensitive applications, as specified in

Copyright (C) IEEE (2023).

This version of this YANG module is part
of IEEE Std 802.1AS;
see the standard itself for full legal notices.";

revision 2023-04-04 {  
description

"Published as part of IEEE Std 802.1ASdn-2023
  1. Initial version.";

reference

"IEEE Std 802.1ASdn-2023 — YANG Data Model — Timing and Synchronization for
  Time-Sensitive
  Applications: IEEE Std 802.1AS-2020, IEEE Std 802.1AS-2020/Cor
  1-2021, IEEE Std 802.1ASdr-2023, IEEE Std 802.1ASdn-2024. IEEE Std
  1588 — IEEE Standard for a Precision Clock Synchronization Protocol
  for Networked Measurement and Control Systems: IEEE Std 1588-2019,
  IEEE Std 1588e-2024."
}

typedef scaled-ns {
  type string {
    pattern "[0-9A-F]{2}(-[0-9A-F]{2}){11}";
  }

description
typedef uscaled-ns {
    type string {
        pattern "[0-9A-F]{2}([-0-9A-F]{2}){11}";
    }
}
description
"The IEEE Std 802.1AS UScaledNs type represents
unsigned values of
time and time interval in units
of 2^16 ns, as an unsigned 96-bit integer.
YANG does not support an unsigned 96-bit integer.
Each of the 12 octets is represented in YANG as a pair of
hexadecimal characters, using uppercase for a letter.
Each octet in the array is Octets are
separated by the dash
character. The most significant octet is first."
reference
"6.4.3.2 of IEEE Std 802.1AS-2020";
}

typedef float64 {
    type string {
        pattern "[0-9A-F]{2}([-0-9A-F]{2}){7}";
    }
}
description
"The IEEE Std 802.1AS Float64 type represents
IEEE Std 754 binary64 (64-bit
double-precision floating-point format).
YANG does not support floating-point‚
binary64. Each of the 8 octets is represented in YANG as a pair of hexadecimal characters, using uppercase for a letter. Each octet in the array is separated by the dash character. The most significant octet is first.

reference
"6.4.2 of IEEE Std 802.1AS-2020";

type uint48 {
    type uint64 {
        range "0..281474976710655";
    }

description
"48-bit unsigned integer data type."

reference
"6.4.2 of IEEE Std 802.1AS";

augment
"/ptp-\text{tt}:ptp-\text{tt}:instances/ptp-\text{tt}:instance/ptp-\text{tt}:default-ds" {
    description
    "Augment IEEE Std 1588 defaultDS.";

    leaf gm-capable {
        type boolean;
        config false;
        description
        "The value is true if the time-aware system is capable of being a grandmaster, and false if the time-aware system is not capable of being a grandmaster.";

        reference
        "14.2.7 of IEEE Std 802.1AS-2020";
    }

    leaf current-utc-offset {
        when
        ".../current-utc-offset-valid='true'";
        type int16;
        config false;
        description
        "Offset from UTC (TAI - UTC).
        The offset is in units of seconds.
        This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM).";
169    reference
170          "14.2.8 of IEEE Std 802.1AS-2020";
171    }
172
173    leaf current-utc-offset-valid {
174        type boolean;
175        config false;
176        description
177          "The value of current-utc-offset-valid shall be true
178          if the value
179          of current-utc-offset is known to be
180          correct, otherwise it shall
181          be false.
182          This leaf applies to the ClockTimeTransmitter entity
183          (i.e., local only, unrelated to a remote GM).";
184    reference
185          "14.2.9 of IEEE Std 802.1AS-2020";
186    }
187
188    leaf leap59 {
189        type boolean;
190        config false;
191        description
192          "If the timescale is PTP, a true value for leap59
193          shall indicate
194          that the last minute of the
195          current UTC day contains 59 seconds.
196          If the timescale is not PTP, the value shall be
197          false.
198          false. This leaf
199          applies to the ClockTimeTransmitter entity
200          (i.e., local only,
201          unrelated to a remote GM).";
202    reference
203          "14.2.10 of IEEE Std 802.1AS-2020";
204    }
205
206    leaf leap61 {
207        type boolean;
208        config false;
209        description
210          "If the timescale is PTP, a true value for leap61
211          shall indicate
212          that the last minute of the
213          current UTC day contains 61 seconds.
214          If the timescale is not PTP, the value shall be
This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

leaf time-traceable {
  type boolean;
  config false;
  description "The value of time-traceable shall be true if the timescale is traceable to a primary reference; otherwise, the value shall be false.

This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

  reference "14.2.11 of IEEE Std 802.1AS-2020";
}

leaf frequency-traceable {
  type boolean;
  config false;
  description "The value of frequency-traceable shall be true if the frequency determining the timescale is traceable to a primary reference; otherwise, the value shall be false.

This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

  reference "14.2.12 of IEEE Std 802.1AS-2020";
}

leaf ptp-timescale {
  type boolean;
  config false;
  description "If ptp-timescale is true, the timescale of the
the ClockTimeTransmitter entity is PTP, which is the elapsed time since the PTP epoch measured using the second defined by International Atomic Time (TAI).

If ptp-timescale is false, the timescale of the ClockTimeTransmitter entity is ARB, which is the elapsed time since an arbitrary epoch.

This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM).

leaf time-source {
    type identityref {
        base ptp-tt:time-source;
    }
    config false;
    description "The source of time used by the Grandmaster Clock This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM).";
    reference "14.2.14 of IEEE Std 802.1AS-2020";
}

leaf last-gm-phase-change {
    type scaled-ns;
    config false;
    description "Phase change that occurred on the most recent change in either the Grandmaster PTP Instance
leaf gm-timebase-indicator {
    type uint16;
    config false;
    description "The timeBaseIndicator of the current Grandmaster PTP Instance."
    reference "14.3.6 of IEEE Std 802.1AS-2020";
}

leaf gm-change-count {
    type yang:counter32;
    config false;
    description "This statistics counter tracks the number of times the Grandmaster PTP Instance has changed in a gPTP domain."
    reference "14.3.7 of IEEE Std 802.1AS-2020";
}

leaf time-of-last-gm-change {
    type yang:timestamp;
    config false;
    description "System time when the most recent Grandmaster Clock change occurred in a gPTP domain."
    change
    This leaf's type is YANG timestamp,
which is based
on system time. System time is an unsigned integer
in units of 10 milliseconds, using an epoch defined by the
implementation (typically time of boot-up)."

reference
"14.3.8 of IEEE Std 802.1AS-2020";
}

leaf time-of-last-phase-change {
  type yang:timestamp;
  config false;
  description
  "System time when the most recent change in Grandmaster Clock
  phase occurred.

  This leaf's type is YANG timestamp, which is based
  on system time. System time is an unsigned integer
  in units
  of 10 milliseconds, using an epoch defined
  by the implementation
  (typically time of boot-up)."

  reference
  "14.3.9 of IEEE Std 802.1AS-2020";
}

leaf time-of-last-freq-change {
  type yang:timestamp;
  config false;
  description
  "System time when the most recent change in Grandmaster Clock
  frequency occurred.

  This leaf's type is YANG timestamp, which is based
  on system time. System time is an unsigned integer
  in units
  of 10 milliseconds, using an epoch defined
  by the implementation
  (typically time of boot-up)."

  reference
  "14.3.10 of IEEE Std 802.1AS-2020";
}

  description
  "Augment IEEE Std 1588 parentDS.";

  leaf cumulative-rate-ratio {

type int32;
config false;
description
  "Estimate of the ratio of the frequency of the Grandmaster Clock
clock to the frequency of the LocalClock entity of this
PTP Instance.
  cumulative-rate-ratio is expressed as
  the fractional frequency
  offset multiplied by 2^41,
  i.e., the quantity (rateRatio - 1.0)(2^41).";
reference
  "14.4.3 of IEEE Std 802.1AS-2020";
}
}
augment
  "/ptp-tp:ptp"
  "/ptp-tp:instances"
  "/ptp-tp:instance"
  "/ptp-tp:ports"
  "/ptp-tp:port"
  "/ptp-tp:port-ds" {
    description
      "Augment IEEE Std 1588 portDS.

      14.8.4 of IEEE Std 802.1AS-2020 specifies ptpPortEnabled
      (ptp-port-enabled), which is provided in YANG as the
      semantically
      equivalent node in ieee1588-tp named
      port-enable (in port-ds).

      14.8.15 of IEEE Std 802.1AS-2020 specifies
      mgtSettableLogAnnounceInterval
      (mgt-settable (mgt-log-announce-interval), which
      is provided in
      YANG as the semantically equivalent node in
      ieee1588-tp named
      log-announce-interval (in port-ds). In the
      context of
      IEEE Std 802.1AS, log-announce-interval cannot be used
      unless use-mgt-log-announce-interval is true.

      14.8.20 of IEEE Std 802.1AS-2020 specifies
      mgtSettableLogSyncInterval
      (mgt-settable (mgt-log-sync-interval), which is provided in YANG
as the semantically equivalent node in ieee1588-tp
log-sync-interval (in port-ds). In the context of
IEEE Std 802.1AS,
log-sync-interval cannot be used unless use-mgt-log-sync-interval
is true.

leaf is-measuring-delay {

type boolean;
config false;
description "Boolean that is true if the port is measuring
PTP Link
propagation delay.";
reference "14.8.6 of IEEE Std 802.1AS-2020";
}

leaf as-capable {

type boolean;
config false;
description "Boolean that is true if and only if it is determined
that this PTP Instance and the PTP Instance at the other end of the link
attached to this port can interoperate with each other via the
IEEE Std 802.1AS protocol.";
reference "10.2.5.1 of IEEE Std 802.1AS-2020
14.8.7 of IEEE Std 802.1AS-2020";
}

leaf mean-link-delay-thresh {

type ptp_tt:time-interval;
description "Propagation time threshold for mean-link-delay,
above which a port is not considered capable of participating in the IEEE Std
802.1AS protocol.";
reference "14.8.9 of IEEE Std 802.1AS-2020";
leaf neighbor-rate-ratio {
  type int32;
  config false;
  description
  "Estimate of the ratio of the frequency of the LocalClock entity
  of the PTP Instance at the other end of the
  link attached to this
  PTP Port, to the frequency of the
  LocalClock entity of this PTP
  Instance.
  neighbor-rate-ratio is expressed as the fractional
  frequency offset multiplied by 2^41,
  i.e., the quantity
  (rateRatio - 1.0)(2^41)."
  reference
  "14.8.11 of IEEE Std 802.1AS-2020";
}

leaf initial-log-announce-interval {
  type int8;
  description
  "When use-mgt-log-announce-interval is false
  (i.e., change with
  Signaling message), this is the
  the logarithm to base 2 of the
  announce
  interval used when the port is initialized.";
  reference
  "14.8.12 of IEEE Std 802.1AS-2020";
}

leaf current-log-announce-interval {
  type int8;
  config false;
  description
  "Logarithm to base 2 of the current
  announce interval.";
  reference
  "14.8.13 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-log-announce-interval {
  type boolean;
  description
"Boolean that determines the source of the announce interval. If the value is true, the announce interval (current-log-announce-interval) is set equal to the value of mgt-log-announce-interval. If the value is false, the announce interval is determined by the AnnounceIntervalSetting state machine (i.e., changed with Signaling message).";


} }

leaf initial-log-sync-interval {
  type int8;
  description "When use-mgt-log-sync-interval is false (i.e., change with Signaling message), this is the logarithm to base 2 of the sync interval used when the port is initialized.";
  reference "14.8.17 of IEEE Std 802.1AS-2020";
}

leaf current-log-sync-interval {
  type int8;
  config false;
  description "Logarithm to base 2 of the current sync interval.";
  reference "14.8.18 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-log-sync-interval {
  type boolean;
  description "Boolean that determines the source of the sync interval. If the value is true, the sync interval (current-log-sync-interval) is set equal to the value of mgt-log-sync-interval. If the value is
false, the sync interval is determined by the SyncIntervalSetting
state machine (i.e., changed with Signaling message)."

reference
"14.8.19 of IEEE Std 802.1AS-2020";

leaf sync-receipt-timeout {
  type uint8;
  description
  "Number of sync intervals that a timeReceiver port waits without receiving synchronization information, before assuming that the timeTransmitter is no longer transmitting synchronization information and that the BTCA needs to be run, if appropriate.";
  reference
  "14.8.21 of IEEE Std 802.1AS-2020";
}

leaf sync-receipt-timeout-interval {
  type uscaled-ns;
  config false;
  description
  "Time interval after which sync receipt timeout occurs if time-synchronization information has not been received during the interval.";
  reference
  "14.8.22 of IEEE Std 802.1AS-2020";
}

leaf initial-log-pdelay-req-interval {
  type int8;
  description
  "When use-mgt-log-pdelay-req-interval is false (i.e., change with Signaling message), this is the logarithm to base 2 of the Pdelay_Req transmit interval used when the port is initialized.";
  reference
  "14.8.23 of IEEE Std 802.1AS-2020";
leaf current-log-pdelay-req-interval {
  type int8;
  config false;
  description
    "Logarithm to base 2 of the current Pdelay_Req transmit interval."
  reference
    "14.8.24 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-log-pdelay-req-interval {
  type boolean;
  description
    "Boolean that determines the source of the Pdelay_Req transmit interval.
     If the value is true, the Pdelay_Req transmit interval (current-log-pdelay-req-interval) is set equal to the value of use-mgt-log-pdelay-req-interval.
     If the value is false, the Pdelay_Req transmit interval is determined by the LinkDelayIntervalSetting state machine (i.e., changed with Signaling message)."
  reference
    "14.8.25 of IEEE Std 802.1AS-2020";
}

leaf mgt-log-pdelay-req-interval {
  type int8;
  description
    "Logarithm to base 2 of the Pdelay_Req transmit interval, used if use-mgt-log-pdelay-req-interval is true.
    This value is not used if use-mgt-log-pdelay-req-interval is false.";
  reference
    "14.8.26 of IEEE Std 802.1AS-2020";
}

leaf initial-log-gptp-cap-interval {
  type int8;
description
   "When use-mgt-log-gptp-cap-interval is false (i.e., change with Signaling message), this is the logarithm to base 2 of the gPTP capable message interval used when the port is initialized.";
reference
   "14.8.27 of IEEE Std 802.1AS-2020";
)

leaf current-log-gptp-cap-interval {
   type int8;
   config false;
   description
   "Logarithm to base 2 of the current gPTP capable message interval.";
   reference
   "14.8.28 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-log-gptp-cap-interval {
   type boolean;
   description
   "Boolean that determines the source of the gPTP capable message interval. If the value is true, the gPTP capable message interval (current-log-gptp-cap-interval) is set equal to the value of mgt-gptp-cap-req-interval. If the value is false, the gPTP capable message interval is determined by the GptpCapableMessageIntervalSetting state machine (i.e., changed with Signaling message).";
   reference
   "14.8.29 of IEEE Std 802.1AS-2020";
}

leaf mgt-log-gptp-cap-interval {
   type int8;
   description
   "Logarithm to base 2 of the gPTP capable message interval, used if use-mgt-log-gptp-cap-interval is true. This value is not used
if use-mgt-log-pdelay-req-interval is false.";

leaf initial-compute-neighbor-rate-ratio {
  type int8 boolean;
  description "When use-mgt-compute-neighbor-rate-ratio is false (i.e., change with Signaling message), this is the initial value of computeNeighborRateRatio.";
  reference "14.8.31 of IEEE Std 802.1AS-2020";
}

leaf current-compute-neighbor-rate-ratio {
  type int8 boolean;
  config false;
  description "Current value of computeNeighborRateRatio.";
  reference "14.8.32 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-compute-neighbor-rate-ratio {
  type boolean;
  description "Boolean that determines the source of computeNeighborRateRatio. If the value is true, computeNeighborRateRatio is set equal to the value of mgt-compute-neighbor-rate-ratio. If the value is false, computeNeighborRateRatio is determined by the LinkDelayIntervalSetting state machine (i.e., changed with Signaling message).";
  reference "14.8.33 of IEEE Std 802.1AS-2020";
}

leaf mgt-compute-neighbor-rate-ratio {
type 

description
"Value of computeNeighborRateRatio, used if
use-mgt-compute-neighbor-rate-ratio is true.
This value is not
used if use-mgt-compute-neighbor-rate-ratio
is false."
reference
"14.8.34 of IEEE Std 802.1AS-2020"

leaf initial-compute-mean-link-delay {

type

description
"When use-mgt-compute-mean-link-delay is false
(i.e., change with
Signaling message), this is the
initial value of
computeMeanLinkDelay."
reference
"14.8.35 of IEEE Std 802.1AS-2020"
}

leaf current-compute-mean-link-delay {

type

cfg false;

description
"Current value of computeMeanLinkDelay."
reference
"14.8.36 of IEEE Std 802.1AS-2020"
}

leaf use-mgt-compute-mean-link-delay {

type boolean;
description
"Boolean that determines the source of
computeMeanLinkDelay. If
the value is true, computeMeanLinkDelay
is set equal to the value
of mgt-compute-mean-link-delay.
If the value is false,
computeMeanLinkDelay is
determined by the
LinkDelayIntervalSetting
state machine (i.e., changed with
Signaling message).";
leaf mgt-compute-mean-link-delay {
  type int8boolean;
  description
  "Value of computeMeanLinkDelay, used if
  use-mgt-compute-mean-link-delay is true.
  This value is not used
  if use-mgt-compute-mean-link-delay
  is false.";
  reference
  "14.8.37 of IEEE Std 802.1AS-2020";
}

leaf allowed-lost-responses {
  type uint8;
  description
  "Number of Pdelay_Req messages for which a valid response is not
  received, above which a port is considered to not
  be exchanging
  peer delay messages with its neighbor.";
  reference
  "14.8.38 of IEEE Std 802.1AS-2020";
}

leaf allowed-faults {
  type uint8;
  description
  "Number of faults above which asCapable is set to false.";
  reference
  "14.8.39 of IEEE Std 802.1AS-2020";
}

leaf gptp-cap-receipt-timeout {
  type uint8;
  description
  "Number of transmission intervals that a port waits without
  receiving the gPTP capable TLV, before assuming that the
  neighbor
  port is no longer invoking the gPTP protocol.";
  reference
  "14.8.40 of IEEE Std 802.1AS-2020";
}
leaf nup {
    type float64;
    description "For an OLT port of an IEEE Std 802.3 EPON link, this value is the effective index of refraction for the EPON upstream wavelength light of the optical path";
    reference "14.8.43 of IEEE Std 802.1AS-2020";
}

leaf ndown {
    type float64;
    description "For an OLT port of an IEEE 802.3 EPON link, this value is the effective index of refraction for the EPON downstream wavelength light of the optical path";
    reference "14.8.44 of IEEE Std 802.1AS-2020";
}

leaf one-step-tx-oper {
    type boolean;
    config false;
    description "This value is true if the port is sending one-step Sync Sync messages, and false if the port is sending two-step Sync and Follow-Up messages.";
    reference "14.8.45 of IEEE Std 802.1AS-2020";
}

leaf one-step-receive {
    type boolean;
    config false;
    description "This value is true if the port is capable of receiving and processing one-step Sync messages.";
    reference "14.8.46 of IEEE Std 802.1AS-2020";
}

leaf one-step-transmit {
type boolean;
config false;
description
  "This value is true if the port is capable of transmitting one-step Sync messages."
reference
  "14.8.47 of IEEE Std 802.1AS-2020";
}
leaf initial-one-step-tx-oper {
  type int8boolean;
description
  "When use-mgt-one-step-tx-oper is false (i.e., change with Signaling message), this is the initial value of current-one-step-tx-oper."
reference
  "14.8.48 of IEEE Std 802.1AS-2020";
}
leaf current-one-step-tx-oper {
  type int8boolean;
  config false;
description
  "This value is true if the port is configured to transmit one-step Sync messages, either via management (mgt-one-step-tx-oper) or Signaling. If both current-one-step-tx-oper and one-step-transmit are true, the port transmits one-step Sync messages (i.e., one-step-tx-oper true)."
reference
  "14.8.49 of IEEE Std 802.1AS-2020";
}
leaf use-mgt-one-step-tx-oper {
  type boolean;
description
  "Boolean that determines the source of current-one-step-tx-oper. If the value is true, current-one-step-tx-oper is set equal to the value of mgt-one-step-tx-oper."
If the value is false, current-one-step-tx-oper is determined by the OneStepTxOperSetting state machine (i.e., changed with Signaling message)."

reference "14.8.50 of IEEE Std 802.1AS-2020";

leaf mgt-one-step-tx-oper {
  type int8boolean;
  description "If use-mgt-one-step-tx-oper is true, current-one-step-tx-oper is set equal to this value. This value is not used if use-mgt-one-step-tx-oper is false."
  reference "14.8.51 of IEEE Std 802.1AS-2020";
}

leaf sync-locked {
  type boolean;
  config false;
  description "This value is true if the port will transmit a Sync as soon as possible after the timeReceiver port receives a Sync message.";
  reference "14.8.52 of IEEE Std 802.1AS-2020";
}

leaf-list pdelay-truncated-timestamps {
  type uint64 {
    range "0..281474976710655";
  }
  config false;ger48; config false;
  min-elements 4;
  max-elements 4;
  description "For full-duplex IEEE Std 802.3 media, and CSN media that use the peer-to-peer delay mechanism to measure path delay,
the values of the four elements of this leaf-list correspond to the timestamps t1, t2, t3, and t4, listed in that order.

Each timestamp is expressed in units of $2^{16}$ ns (i.e., the value of each array element is equal to the remainder obtained upon dividing the respective timestamp, expressed in units of $2^{16}$ ns, by $2^{48}$).

At any given time, the timestamp values stored in the array are for the same, and most recently completed, peer delay message exchange. For each timestamp, only 48-bits are valid (the upper 16-bits are always zero).

reference "14.8.53 of IEEE Std 802.1AS-2020";

leaf rx-sync-count {
    type yang:counter32;
    config false;
    description "Counter that increments every time synchronization information is received.";
}
reference
    "14.10.2 of IEEE Std 802.1AS-2020";

leaf rx-one-step-sync-count {
    type yang:counter32;
    config false;
    description
    "Counter that increments every time a one-step Sync
    message is received.";
    reference
    "14.10.3 of IEEE Std 802.1AS-2020";
}

leaf rx-follow-up-count {
    type yang:counter32;
    config false;
    description
    "Counter that increments every time a Follow_Up
    message is received.";
    reference
    "14.10.4 of IEEE Std 802.1AS-2020";
}

leaf rx-pdelay-req-count {
    type yang:counter32;
    config false;
    description
    "Counter that increments every time a Pdelay_Req
    message is received.";
    reference
    "14.10.5 of IEEE Std 802.1AS-2020";
}

leaf rx-pdelay-resp-count {
    type yang:counter32;
    config false;
    description
    "Counter that increments every time a Pdelay_Resp
    message is received.";
    reference
    "14.10.6 of IEEE Std 802.1AS-2020";
leaf rx-pdelay-resp-follow-up-count {
    type yang:counter32;
    config false;
    description "Counter that increments every time a Pdelay_Resp_Follow_Up
    message is received.";
    reference "14.10.7 of IEEE Std 802.1AS-2020";
}

leaf rx-announce-count {
    type yang:counter32;
    config false;
    description "Counter that increments every time an Announce
    message is
    received.";
    reference "14.10.8 of IEEE Std 802.1AS-2020";
}

leaf rx-packet-discard-count {
    type yang:counter32;
    config false;
    description "Counter that increments every time a PTP message of the
    respective PTP Instance is discarded.";
    reference "14.10.9 of IEEE Std 802.1AS-2020";
}

leaf sync-receipt-timeout-count {
    type yang:counter32;
    config false;
    description "Counter that increments every time a sync receipt \texttt{timeout
    timeout} occurs.";
    reference "14.10.10 of IEEE Std 802.1AS-2020";
}

leaf announce-receipt-timeout-count {
    type yang:counter32;
    config false;
description
"Counter that increments every time an announce receipt timeout occurs."
reference
"14.10.11 of IEEE Std 802.1AS-2020";
}

leaf pdelay-allowed-lost-exceeded-count {

type yang:counter32;
cfg false;
description
"Counter that increments every time the value of the variable lostResponses exceeds the value of the variable allowedLostResponses, in the RESET state of the MDPdelayReq state machine."
reference
"14.10.12 of IEEE Std 802.1AS-2020";
}

leaf tx-sync-count {

type yang:counter32;
cfg false;
description
"Counter that increments every time synchronization information is transmitted."
reference
"14.10.13 of IEEE Std 802.1AS-2020";
}

leaf tx-one-step-sync-count {

type yang:counter32;
cfg false;
description
"Counter that increments every time a one-step Sync message is transmitted."
reference
"14.10.14 of IEEE Std 802.1AS-2020";
}

leaf tx-follow-up-count {

type yang:counter32;
cfg false;
description
leaf tx-pdelay-req-count {
  type yang:counter32;
  config false;
  description
    "Counter that increments every time a Pdelay_Req
    message is transmitted."
  reference
    "14.10.16 of IEEE Std 802.1AS-2020";
}

leaf tx-pdelay-resp-count {
  type yang:counter32;
  config false;
  description
    "Counter that increments every time a Pdelay_Resp
    message is transmitted."
  reference
    "14.10.17 of IEEE Std 802.1AS-2020";
}

leaf tx-pdelay-resp-follow-up-count {
  type yang:counter32;
  config false;
  description
    "Counter that increments every time a Pdelay_Resp_Follow_Up
    message is transmitted."
  reference
    "14.10.18 of IEEE Std 802.1AS-2020";
}

leaf tx-announce-count {
  type yang:counter32;
  config false;
  description
    "Counter that increments every time an Announce
    message is transmitted.";
reference
    "14.10.19 of IEEE Std 802.1AS-2020";
}
}

augment
    "/ptp-tp:ptp"+
    "/ptp-tp:instances"+
    "/ptp-tp:instance"+
    "/ptp-tp:ports"+
    "/ptp-tp:port" {

description
    "Augment to add asymmetry-measurement-mode-ds to
    IEEE Std 1588 PTP
    Port."

    container asymmetry-measurement-mode-ds {
        description
            "Represents the capability to enable/disable the Asymmetry
            Compensation Measurement Procedure on a PTP Port.
            This data set
            is used instead of the CMLDS
            asymmetry-measurement-mode-ds when
            only a single PTP
            Instance is present (i.e., CMLDS is not used)."

        reference
            "14.13 of IEEE Std 802.1AS-2020
            Annex G of IEEE Std 802.1AS-2020";

        leaf enabled {
            type boolean;
            description
                "For full-duplex IEEE Std 802.3 media, the value is true
                if an
                asymmetry measurement is being performed for the
                link attached
                to this PTP Port, and false otherwise.
                For all other media, the
                value shall be false.";

            }

        }

    }

    }

augment
    "/ptp-tp:ptp"+
    "/ptp-tp:common-services"+

    Page 32
"/ptp-ct:cmlds";
"/ptp-ct:ports";
"/ptp-ct:port";
"/ptp-ct:link-port-ds" {
  description
  "Augment IEEE Std 1588 cmldsLinkPortDS."

  14.16.9 of IEEE Std 802.1AS-2020 specifies neighborRateRatio
  (neighbor-rate-ratio), which is provided in YANG as the
  semantically equivalent node in ieee1588-ptp named
  scaled-neighbor-rate-ratio (in link-port-ds).";

  leaf cmlds-link-port-enabled {
    type boolean;
    config false;
    description
    "Boolean that is true if both delay-mechanism is common-p2p and
    the value of ptp-port-enabled is true, for at least one
    PTP Port
    that uses the CMLDS; otherwise, the value is false.";
    reference
    "11.2.18.1 of IEEE Std 802.1AS-2020
    14.16.3 of IEEE Std 802.1AS-2020";
  }

  leaf is-measuring-delay {
    type boolean;
    config false;
    description
    "This leaf is analogous to is-measuring-delay
    for a PTP Port, but
    applicable to this Link Port.";
    reference
    "14.16.4 of IEEE Std 802.1AS-2020";
  }

  leaf as-capable-across-domains {
    type boolean;
    config false;
    description
    "This leaf is true when all PTP Instances (domains)
    for this Link
    Port detect proper exchange of Pdelay
    messages.";
    reference
    "11.2.2 of IEEE Std 802.1AS-2020";
leaf mean-link-delay-thresh {
  type ptp_tt:time-interval;
  description
    "Propagation time threshold for mean-link-delay, above which a Link Port is not considered capable of participating in the IEEE Std 802.1AS protocol."
    reference
    "14.16.7 of IEEE Std 802.1AS-2020";
}

leaf initial-log-pdelay-req-interval {
  type int8;
  description
    "This leaf is analogous to initial-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."
    reference
    "14.16.10 of IEEE Std 802.1AS-2020";
}

leaf current-log-pdelay-req-interval {
  type int8;
  config false;
  description
    "This leaf is analogous to current-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."
    reference
    "14.16.11 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-log-pdelay-req-interval {
  type boolean;
  description
    "This leaf is analogous to use-mgt-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."
    reference
    "14.16.12 of IEEE Std 802.1AS-2020";
}

leaf mgt-log-pdelay-req-interval {
  type int8;
  description
"This leaf is analogous to mgt-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."

leaf initial-compute-neighbor-rate-ratio {
  type int8 boolean;
  description
    "This leaf is analogous to initial-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
    "14.16.14 of IEEE Std 802.1AS-2020";
}

leaf current-compute-neighbor-rate-ratio {
  type int8 boolean;
  config false;
  description
    "This leaf is analogous to current-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
    "14.16.15 of IEEE Std 802.1AS-2020";
}

leaf use-mgt-compute-neighbor-rate-ratio {
  type boolean;
  description
    "This leaf is analogous to use-mgt-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
    "14.16.16 of IEEE Std 802.1AS-2020";
}

leaf mgt-compute-neighbor-rate-ratio {
  type int8 boolean;
  description
    "This leaf is analogous to mgt-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
    "14.16.17 of IEEE Std 802.1AS-2020";
}

leaf initial-compute-mean-link-delay {

}
for a PTP Port, but applicable to this Link Port.

reference
"14.16.18 of IEEE Std 802.1AS-2020";
)

leaf current-compute-mean-link-delay {
  type int8boolean;
  description
  "This leaf is analogous to current-compute-mean-link-delay for a PTP Port, but applicable to this Link Port.
  
  reference
  "14.16.19 of IEEE Std 802.1AS-2020";
)

leaf use-mgt-compute-mean-link-delay {
  type boolean;
  description
  "This leaf is analogous to use-mgt-compute-mean-link-delay for a PTP Port, but applicable to this Link Port.
  
  reference
  "14.16.20 of IEEE Std 802.1AS-2020";
)

leaf mgt-compute-mean-link-delay {
  type int8boolean;
  description
  "This leaf is analogous to mgt-compute-mean-link-delay for a PTP Port, but applicable to this Link Port.
  
  reference
  "14.16.21 of IEEE Std 802.1AS-2020";
)

leaf allowed-lost-responses {
  type uint8;
  description
  "This leaf is analogous to allowed-lost-responses for a PTP Port, but applicable to this Link Port.
  
  reference
  "14.16.22 of IEEE Std 802.1AS-2020";
leaf allowed-faults {
  type uint8;
  description
  "This leaf is analogous to allowed-faults for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.23 of IEEE Std 802.1AS-2020";
}

leaf-list pdelay-truncated-timestamps {
  type uint64 {
    range "0..281474976710655";
    config false;
    min-elements 4;
    max-elements 4;
    description
    "This leaf is analogous to pdelay-truncated-timestamps for a PTP Port, but applicable to this Link Port."
    reference
    "14.16.25 of IEEE Std 802.1AS-2020";
  }
}

augment "/ptp-cc:ptp"+
  "/ptp-cc:common-services"+
  "/ptp-cc:cmlds"+
  "/ptp-cc:ports"+
  "/ptp-cc:port" {
  description
  "Augment to add port-statistics-ds to IEEE Std 1588 Link Port."
  }

container port-statistics-ds {
  description
  "This container is analogous to port-statistics-ds for a PTP Port, but applicable to this Link Port."
  reference
  "14.17 of IEEE Std 802.1AS-2020";
leaf rx-pdelay-req-count {
  type yang:counter32;
  config false;
  description
       "This leaf is analogous to rx-pdelay-req-count
       for a PTP Port, but applicable to this Link Port."
  reference
       "14.17.2 of IEEE Std 802.1AS-2020";
}

leaf rx-pdelay-resp-count {
  type yang:counter32;
  config false;
  description
       "This leaf is analogous to rx-pdelay-resp-count
       for a PTP Port, but applicable to this Link Port."
  reference
       "14.17.3 of IEEE Std 802.1AS-2020";
}

leaf rx-pdelay-resp-follow-up-count {
  type yang:counter32;
  config false;
  description
       "This leaf is analogous to rx-pdelay-resp-follow-up-count
       for a PTP Port, but applicable to this Link Port."
  reference
       "14.17.4 of IEEE Std 802.1AS-2020";
}

leaf rx-packet-discard-count {
  type yang:counter32;
  config false;
  description
       "This leaf is analogous to rx-packet-discard-count
       for a PTP Port, but applicable to this Link Port."
  reference
       "14.17.5 of IEEE Std 802.1AS-2020";
}

leaf pdelay-allowed-lost-exceeded-count {
  type yang:counter32;
  config false;
description
   "This leaf is analogous to
   pdelay.allowed-lost-exceeded-count
   for a PTP Port, but applicable to this Link Port.";
reference
   "14.17.6 of IEEE Std 802.1AS-2020";
}

leaf tx-pdelay-req-count {
   type yang:counter32;
   config false;
   description
   "This leaf is analogous to tx-pdelay-req-count
   for a PTP Port,
   but applicable to this Link Port.";
   reference
   "14.17.7 of IEEE Std 802.1AS-2020";
}

leaf tx-pdelay-resp-count {
   type yang:counter32;
   config false;
   description
   "This leaf is analogous to tx-pdelay-resp-count
   for a PTP Port,
   but applicable to this Link Port.";
   reference
   "14.17.8 of IEEE Std 802.1AS-2020";
}

leaf tx-pdelay-resp-follow-up-count {
   type yang:counter32;
   config false;
   description
   "This leaf is analogous to tx-pdelay-resp-follow-up-count for a
   PTP Port, but applicable to this Link Port.";
   reference
   "14.17.9 of IEEE Std 802.1AS-2020";
}

augment
   "/ptp-tp:ptp",
   "/ptp-tp:common-services",
   "/ptp-tp:cmlds"
"/ptp-tt:ports" +
"/ptp-tt:port" {
  description
  "Augment to add asymmetry-measurement-mode-ds to
  IEEE Std 1588 Link Port."

  container asymmetry-measurement-mode-ds {
    description
    "This container is analogous to asymmetry-measurement-mode-ds for
    a PTP Port, but applicable to this Link Port."
    reference
    "14.18 of IEEE Std 802.1AS-2020";

    leaf enabled {
      type boolean;
      description
      "This leaf is analogous to
      asymmetry-measurement-mode-ds.enabled
      for a PTP Port, but
      applicable to this Link Port."
      reference
      "14.13.2 of IEEE Std 802.1AS"
    }
  }
}

Without change indications (for replacement)

module ieee802-dot1as-gptp {
  yang-version "1.1";
  namespace urn:ieee:std:802.1AS:yang:ieee802-dot1as-gptp;
  prefix dot1as-gptp;
  import ietf-yang-types {
    prefix yang;
  }
  import ieee1588-ptp-tt {
    prefix ptp-tt;
  }
  organization
  "IEEE 802.1 Working Group";
  contact
  "WG-URL: http://ieee802.org/1/
  WG-EMail: stds-802-1-1@ieee.org
  "
Copyright (C) IEEE (2024). This version of this YANG module is part of IEEE Std 802.1AS; see the standard itself for full legal notices.

revision 2024-04-01 {
    description "Published as part of IEEE Std 802.1ASdn-2024. Initial version.";
}

typedef scaled-ns {
    type string {
        pattern "[0-9A-F]{2}(-[0-9A-F]{2}){11}";
    }
    description "The IEEE Std 802.1AS ScaledNs type represents signed values of time and time interval in units of 2^16 ns, as a signed 96-bit integer. Each of the 12 octets is represented as a pair of hexadecimal characters, using uppercase for a letter. Octets are separated by a dash character. The most significant octet is first.";
    reference "6.4.3.1 of IEEE Std 802.1AS";
}

typedef uscaled-ns {
    type string {
        pattern "[0-9A-F]{2}(-[0-9A-F]{2}){11}";
    }
    description "The IEEE Std 802.1AS UScaledNs type represents unsigned values of time and time interval in units of 2^16 ns, as an unsigned 96-bit integer. Each of the 12 octets is represented as a pair of
hexadecimal characters, using uppercase for a letter. Octets are separated by a dash character. The most significant octet is first.

reference

"6.4.3.2 of IEEE Std 802.1AS
3.4 of IEEE Std 754-2019"

}
typedef float64 {
type string {
  pattern "[0-9A-F]{2}(-[0-9A-F]{2}){7}";
}
description

"The IEEE Std 802.1AS Float64 type represents IEEE Std 754 binary64. Each of the 8 octets is represented as a pair of hexadecimal characters, using uppercase for a letter. Octets are separated by a dash character. The most significant octet is first."

reference

"6.4.2 of IEEE Std 802.1AS"

}
typedef uinteger48 {
type uint64 {
  range "0..281474976710655"
}
description

"48-bit unsigned integer data type."

reference

"6.4.2 of IEEE Std 802.1AS"

}
augment

description

"Augment IEEE Std 1588 defaultDS."

leaf gm-capable {
type boolean;
  config false;

description

"The value is true if the time-aware system is capable of being a grandmaster, and false if the time-aware system is not capable of being a grandmaster."

reference

"14.2.7 of IEEE Std 802.1AS"

}
leaf current-utc-offset {
  when
  "../current-utc-offset-valid='true'"
  type int16;
  config false;
description
"Offset from UTC (TAI - UTC). The offset is in units of seconds.
This leaf applies to the ClockTimeTransmitter entity (i.e., local
only, unrelated to a remote GM).";
reference
"14.2.8 of IEEE Std 802.1AS";
}
leaf current-utc-offset-valid {
  type boolean;
  config false;
  description
  "The value of current-utc-offset-valid shall be true if the value
  of current-utc-offset is known to be correct, otherwise it shall
  be false. This leaf applies to the ClockTimeTransmitter entity
  (i.e., local only, unrelated to a remote GM).";
  reference
  "14.2.9 of IEEE Std 802.1AS";
}
leaf leap59 {
  type boolean;
  config false;
  description
  "If the timescale is PTP, a true value for leap59 shall indicate
  that the last minute of the current UTC day contains 59 seconds.
  If the timescale is not PTP, the value shall be false. This leaf
  applies to the ClockTimeTransmitter entity (i.e., local only,
  unrelated to a remote GM).";
  reference
  "14.2.10 of IEEE Std 802.1AS";
}
leaf leap61 {
  type boolean;
  config false;
  description
  "If the timescale is PTP, a true value for leap61 shall indicate
  that the last minute of the current UTC day contains 61 seconds.
  If the timescale is not PTP, the value shall be false. This leaf
  applies to the ClockTimeTransmitter entity (i.e., local only,
  unrelated to a remote GM).";
  reference
  "14.2.11 of IEEE Std 802.1AS";
}
leaf time-traceable {
  type boolean;
  config false;
  description
"The value of time-traceable shall be true if the timescale is traceable to a primary reference; otherwise, the value shall be false. This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

reference
"14.2.12 of IEEE Std 802.1AS";

}

leaf frequency-traceable {
  type boolean;
  config false;
  description
  "The value of frequency-traceable shall be true if the frequency determining the timescale is traceable to a primary reference; otherwise, the value shall be false. This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

reference
"14.2.13 of IEEE Std 802.1AS";

}

leaf ptp-timescale {
  type boolean;
  config false;
  description
  "If ptp-timescale is true, the timescale of the ClockTimeTransmitter entity is PTP, which is the elapsed time since the PTP epoch measured using the second defined by International Atomic Time (TAI). If ptp-timescale is false, the timescale of the ClockTimeTransmitter entity is ARB, which is the elapsed time since an arbitrary epoch. This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

reference
"14.2.14 of IEEE Std 802.1AS";

}

leaf time-source {
  type identityref {
    base ptp-tt:time-source;
  }
  config false;
  description
  "The source of time used by the Grandmaster Clock This leaf applies to the ClockTimeTransmitter entity (i.e., local only, unrelated to a remote GM)."

reference
"14.2.15 of IEEE Std 802.1AS";
augment
  description
  "Augment IEEE Std 1588 currentDS.";
  leaf last-gm-phase-change {
    type scaled-ns;
    config false;
    description
    "Phase change that occurred on the most recent change in either 
    the Grandmaster PTP Instance or gm-timebase-indicator leaf.";
    reference
    "14.3.4 of IEEE Std 802.1AS";
  }
  leaf last-gm-freq-change {
    type float64;
    config false;
    description
    "Frequency change that occurred on the most recent change in 
    either the Grandmaster PTP Instance or gm-timebase-indicator 
    leaf.";
    reference
    "14.3.5 of IEEE Std 802.1AS";
  }
  leaf gm-timebase-indicator {
    type uint16;
    config false;
    description
    "The timeBaseIndicator of the current Grandmaster PTP Instance.";
    reference
    "14.3.6 of IEEE Std 802.1AS";
  }
  leaf gm-change-count {
    type yang:counter32;
    config false;
    description
    "This statistics counter tracks the number of times the 
    Grandmaster PTP Instance has changed in a gPTP domain.";
    reference
    "14.3.7 of IEEE Std 802.1AS";
  }
  leaf time-of-last-gm-change {
    type yang:timestamp;
    config false;
    description
    "System time when the most recent Grandmaster Clock change
occurred in a gPTP domain. This leaf's type is YANG timestamp, which is based on system time. System time is an unsigned integer in units of 10 milliseconds, using an epoch defined by the implementation (typically time of boot-up).";

```
reference
"14.3.8 of IEEE Std 802.1AS";
```

```
leaf time-of-last-phase-change {
  type yang:timestamp;
  config false;
  description
  "System time when the most recent change in Grandmaster Clock phase occurred. This leaf's type is YANG timestamp, which is based on system time. System time is an unsigned integer in units of 10 milliseconds, using an epoch defined by the implementation (typically time of boot-up).";
  reference
  "14.3.9 of IEEE Std 802.1AS";
}
```

```
leaf time-of-last-freq-change {
  type yang:timestamp;
  config false;
  description
  "System time when the most recent change in Grandmaster Clock frequency occurred. This leaf's type is YANG timestamp, which is based on system time. System time is an unsigned integer in units of 10 milliseconds, using an epoch defined by the implementation (typically time of boot-up).";
  reference
  "14.3.10 of IEEE Std 802.1AS";
}
```

```
  description
  "Augment IEEE Std 1588 parentDS.";
  leaf cumulative-rate-ratio {
    type int32;
    config false;
    description
    "Estimate of the ratio of the frequency of the Grandmaster Clock to the frequency of the LocalClock entity of this PTP Instance. cumulative-rate-ratio is expressed as the fractional frequency offset multiplied by 2^41, i.e., the quantity (rateRatio - 1.0)(2^41).";
    reference
    "14.4.3 of IEEE Std 802.1AS";
  }
}
```
1916 )
1917 )
1918 augment
1919  "/ptp-tp:ptp"+
1920  "/ptp-tp:instance"+
1921  "/ptp-tp:ports"+
1922  "/ptp-tp:port"+
1923  "/ptp-tp:port-ds" {
1924 description
1925   "Augment IEEE Std 1588 portDS.
1926
1927 14.8.4 of IEEE Std 802.1AS specifies ptpPortEnabled
1928 (ptp-port-enabled), which is provided in YANG as the semantically
1929 equivalent node in ieee1588-tp named port-enable (in port-ds).
1930
1931 14.8.15 of IEEE Std 802.1AS specifies
1932 mgtSettableLogAnnounceInterval (mgt-log-announce-interval), which
1933 is provided in YANG as the semantically equivalent node in
1934 ieee1588-tp named log-announce-interval (in port-ds). In the
1935 context of IEEE Std 802.1AS, log-announce-interval cannot be used
1936 unless use-mgt-log-announce-interval is true.
1937
1938 14.8.20 of IEEE Std 802.1AS specifies mgtSettableLogSyncInterval
1939 (mgt-log-sync-interval), which is provided in YANG as the
1940 semantically equivalent node in ieee1588-tp named
1941 log-sync-interval (in port-ds). In the context of IEEE Std 802.1AS,
1942 log-sync-interval cannot be used unless use-mgt-log-sync-interval
1943 is true.";
1944 leaf is-measuring-delay {
1945   type boolean;
1946   config false;
1947   description
1948     "Boolean that is true if the port is measuring PTP Link
1949     propagation delay.";
1950   reference
1951     "14.8.6 of IEEE Std 802.1AS";
1952 }
1953 leaf as-capable {
1954   type boolean;
1955   config false;
1956   description
1957     "Boolean that is true if and only if it is determined that this
1958     PTP Instance and the PTP Instance at the other end of the link
1959     attached to this port can interoperate with each other via the
1960     IEEE Std 802.1AS protocol.";
reference
"10.2.5.1 of IEEE Std 802.1AS
14.8.7 of IEEE Std 802.1AS";
}

leaf mean-link-delay-thresh {
  type ptp-tt:time-interval;
  description
  "Propagation time threshold for mean-link-delay, above which a
  port is not considered capable of participating in the IEEE Std
  802.1AS protocol."
  reference
  "14.8.9 of IEEE Std 802.1AS";
}

leaf neighbor-rate-ratio {
  type int32;
  config false;
  description
  "Estimate of the ratio of the frequency of the LocalClock entity
  of the PTP Instance at the other end of the link attached to this
  PTP Port, to the frequency of the LocalClock entity of this PTP
  Instance. neighbor-rate-ratio is expressed as the fractional
  frequency offset multiplied by 2^41, i.e., the quantity
  (rateRatio - 1.0)(2^41)."
  reference
  "14.8.11 of IEEE Std 802.1AS";
}

leaf initial-log-announce-interval {
  type int8;
  description
  "When use-mgt-log-announce-interval is false (i.e., change with
  Signaling message), this is the the logarithm to base 2 of the
  announce interval used when the port is initialized."
  reference
  "14.8.12 of IEEE Std 802.1AS";
}

leaf current-log-announce-interval {
  type int8;
  config false;
  description
  "Logarithm to base 2 of the current announce interval."
  reference
  "14.8.13 of IEEE Std 802.1AS";
}

leaf use-mgt-log-announce-interval {
  type boolean;
  description
"Boolean that determines the source of the announce interval. If the value is true, the announce interval (current-log-announce-interval) is set equal to the value of mgt-log-announce-interval. If the value is false, the announce interval is determined by the AnnounceIntervalSetting state machine (i.e., changed with Signaling message.");

leaf initial-log-sync-interval {
  type int8;
  description "When use-mgt-log-sync-interval is false (i.e., change with Signaling message), this is the logarithm to base 2 of the sync interval used when the port is initialized.";
  reference "14.8.17 of IEEE Std 802.1AS";
}

leaf current-log-sync-interval {
  type int8;
  config false;
  description "Logarithm to base 2 of the current sync interval.";
  reference "14.8.18 of IEEE Std 802.1AS";
}

leaf use-mgt-log-sync-interval {
  type boolean;
  description "Boolean that determines the source of the sync interval. If the value is true, the sync interval (current-log-sync-interval) is set equal to the value of mgt-log-sync-interval. If the value is false, the sync interval is determined by the SyncIntervalSetting state machine (i.e., changed with Signaling message.");
  reference "14.8.19 of IEEE Std 802.1AS";
}

leaf sync-receipt-timeout {
  type uint8;
  description "Number of sync intervals that a timeReceiver port waits without receiving synchronization information, before assuming that the timeTransmitter is no longer transmitting synchronization information and that the BTCA needs to be run, if appropriate.";
  reference "14.8.21 of IEEE Std 802.1AS";
leaf sync-receipt-timeout-interval {
  type uscaled-ns;
  config false;
  description
  "Time interval after which sync receipt timeout occurs if
time-synchronization information has not been received during the
interval.";
  reference
  "14.8.22 of IEEE Std 802.1AS";
}

leaf initial-log-pdelay-req-interval {
  type int8;
  description
  "When use-mgt-log-pdelay-req-interval is false (i.e., change with
Signaling message), this is the the logarithm to base 2 of the
Pdelay_Req transmit interval used when the port is initialized.";
  reference
  "14.8.23 of IEEE Std 802.1AS";
}

leaf current-log-pdelay-req-interval {
  type int8;
  config false;
  description
  "Logarithm to base 2 of the current Pdelay_Req transmit interval.";
  reference
  "14.8.24 of IEEE Std 802.1AS";
}

leaf use-mgt-log-pdelay-req-interval {
  type boolean;
  description
  "Boolean that determines the source of the Pdelay_Req transmit
interval. If the value is true, the Pdelay_Req transmit interval
(current-log-pdelay-req-interval) is set equal to the value of
mgt-log-pdelay-req-interval. If the value is false, the
Pdelay_Req transmit interval is determined by the
LinkDelayIntervalSetting state machine (i.e., changed with
Signaling message).";
  reference
  "14.8.25 of IEEE Std 802.1AS";
}

leaf mgt-log-pdelay-req-interval {
  type int8;
  description
  "Logarithm to base 2 of the Pdelay_Req transmit interval, used if
use-mgt-log-pdelay-req-interval is true. This value is not used

if use-mgt-log-pdelay-req-interval is false.

reference
"14.8.26 of IEEE Std 802.1AS"
}
leaf initial-log-gptp-cap-interval {
  type int8;
  description
  "When use-mgt-log-gptp-cap-interval is false (i.e., change with
  Signaling message), this is the logarithm to base 2 of the
  gPTP capable message interval used when the port is initialized.";
  reference
  "14.8.27 of IEEE Std 802.1AS"
}
leaf current-log-gptp-cap-interval {
  type int8;
  config false;
  description
  "Logarithm to base 2 of the current gPTP capable message
  interval.";
  reference
  "14.8.28 of IEEE Std 802.1AS"
}
leaf use-mgt-log-gptp-cap-interval {
  type boolean;
  description
  "Boolean that determines the source of the gPTP capable message
  interval. If the value is true, the gPTP capable message interval
  (current-log-gptp-cap-interval) is set equal to the value of
  mgt-gptp-cap-req-interval. If the value is false, the gPTP
  capable message interval is determined by the
  GptpCapableMessageIntervalSetting state machine (i.e., changed
  with Signaling message).";
  reference
  "14.8.29 of IEEE Std 802.1AS"
}
leaf mgt-log-gptp-cap-interval {
  type int8;
  description
  "Logarithm to base 2 of the gPTP capable message interval, used
  if use-mgt-log-gptp-cap-interval is true. This value is not used
  if use-mgt-log-pdelay-req-interval is false.";
  reference
  "14.8.30 of IEEE Std 802.1AS"
}
leaf initial-compute-neighbor-rate-ratio {
  type boolean;
description
   "When use-mgt-compute-neighbor-rate-ratio is false (i.e., change
   with Signaling message), this is the initial value of
   computeNeighborRateRatio.";
reference
   "14.8.31 of IEEE Std 802.1AS";
}
leaf current-compute-neighbor-rate-ratio {
   type boolean;
   config false;
   description
      "Current value of computeNeighborRateRatio.";
   reference
      "14.8.32 of IEEE Std 802.1AS";
}
leaf use-mgt-compute-neighbor-rate-ratio {
   type boolean;
   description
      "Boolean that determines the source of computeNeighborRateRatio..
If the value is true, computeNeighborRateRatio is set equal to
the value of mgt-compute-neighbor-rate-ratio. If the value is
false, computeNeighborRateRatio is determined by the
LinkDelayIntervalSetting state machine (i.e., changed with
Signaling message).";
   reference
      "14.8.33 of IEEE Std 802.1AS";
}
leaf mgt-compute-neighbor-rate-ratio {
   type boolean;
   description
      "Value of computeNeighborRateRatio, used if
use-mgt-compute-neighbor-rate-ratio is true. This value is not
used if use-mgt-compute-neighbor-rate-ratio is false.";
   reference
      "14.8.34 of IEEE Std 802.1AS";
}
leaf initial-compute-mean-link-delay {
   type boolean;
   description
      "When use-mgt-compute-mean-link-delay is false (i.e., change with
Signaling message), this is the initial value of
computeMeanLinkDelay.";
   reference
      "14.8.35 of IEEE Std 802.1AS";
}
leaf current-compute-mean-link-delay {
leaf use-mgt-compute-mean-link-delay {
  type boolean;
  description "Boolean that determines the source of computeMeanLinkDelay. If the value is true, computeMeanLinkDelay is set equal to the value of mgt-compute-mean-link-delay. If the value is false, computeMeanLinkDelay is determined by the LinkDelayIntervalSetting state machine (i.e., changed with Signaling message).";
  reference "14.8.37 of IEEE Std 802.1AS";
}
leaf mgt-compute-mean-link-delay {
  type boolean;
  description "Value of computeMeanLinkDelay, used if use-mgt-compute-mean-link-delay is true. This value is not used if use-mgt-compute-mean-link-delay is false.";
  reference "14.8.38 of IEEE Std 802.1AS";
}
leaf allowed-lost-responses {
  type uint8;
  description "Number of Pdelay_Req messages for which a valid response is not received, above which a port is considered to not be exchanging peer delay messages with its neighbor.";
  reference "14.8.39 of IEEE Std 802.1AS";
}
leaf allowed-faults {
  type uint8;
  description "Number of faults above which asCapable is set to false.";
  reference "14.8.40 of IEEE Std 802.1AS";
}
leaf gptp-cap-receipt-timeout {
  type uint8;
description
"Number of transmission intervals that a port waits without
receiving the gPTP capable TLV, before assuming that the neighbor
port is no longer invoking the gPTP protocol."
reference
"14.8.41 of IEEE Std 802.1AS";
}

leaf nup {
  type float64;
  description
  "For an OLT port of an IEEE Std 802.3 EPON link, this value is
  the effective index of refraction for the EPON upstream
  wavelength light of the optical path";
  reference
  "14.8.43 of IEEE Std 802.1AS";
}

leaf ndown {
  type float64;
  description
  "For an OLT port of an IEEE 802.3 EPON link, this value is the
  effective index of refraction for the EPON downstream wavelength
  light of the optical path";
  reference
  "14.8.44 of IEEE Std 802.1AS";
}

leaf one-step-tx-oper {
  type boolean;
  config false;
  description
  "This value is true if the port is sending one-step Sync
  messages, and false if the port is sending two-step Sync and
  Follow-Up messages.";
  reference
  "14.8.45 of IEEE Std 802.1AS";
}

leaf one-step-receive {
  type boolean;
  config false;
  description
  "This value is true if the port is capable of receiving and
  processing one-step Sync messages.";
  reference
  "14.8.46 of IEEE Std 802.1AS";
}

leaf one-step-transmit {
  type boolean;
config false;

description
"This value is true if the port is capable of transmitting
one-step Sync messages."

reference
"14.8.47 of IEEE Std 802.1AS"

leaf initial-one-step-tx-oper {
    type boolean;
    description
    "When use-mgt-one-step-tx-oper is false (i.e., change with
    Signaling message), this is the initial value of
    current-one-step-tx-oper."
    reference
    "14.8.48 of IEEE Std 802.1AS"
}

leaf current-one-step-tx-oper {
    type boolean;
    description
    "This value is true if the port is configured to transmit
    one-step Sync messages, either via management
    (mgt-one-step-tx-oper) or Signaling. If both
    current-one-step-tx-oper and one-step-transmit are true, the port
    transmits one-step Sync messages (i.e., one-step-tx-oper true)."
    reference
    "14.8.49 of IEEE Std 802.1AS"
}

leaf use-mgt-one-step-tx-oper {
    type boolean;
    description
    "Boolean that determines the source of current-one-step-tx-oper.
    If the value is true, current-one-step-tx-oper is set equal to
    the value of mgt-one-step-tx-oper. If the value is false,
    current-one-step-tx-oper is determined by the
    OneStepTxOperSetting state machine (i.e., changed with Signaling
    message)."
    reference
    "14.8.50 of IEEE Std 802.1AS"
}

leaf mgt-one-step-tx-oper {
    type boolean;
    description
    "If use-mgt-one-step-tx-oper is true, current-one-step-tx-oper is
    set equal to this value. This value is not used if
    use-mgt-one-step-tx-oper is false.";
reference
  "14.8.51 of IEEE Std 802.1AS";
}
leaf sync-locked {
  type boolean;
  config false;
  description
    "This value is true if the port will transmit a Sync as soon as possible after the timeReceiver port receives a Sync message.";
  reference
    "14.8.52 of IEEE Std 802.1AS";
}
leaf-list pdelay-truncated-timestamps {
  type uinteger48;
  config false;
  min-elements 4;
  max-elements 4;
  description
    "For full-duplex IEEE Std 802.3 media, and CSN media that use the peer-to-peer delay mechanism to measure path delay, the values of the four elements of this leaf-list correspond to the timestamps t1, t2, t3, and t4, listed in that order. Each timestamp is expressed in units of 2^-16 ns (i.e., the value of each array element is equal to the remainder obtained upon dividing the respective timestamp, expressed in units of 2^-16 ns, by 2^48).
    At any given time, the timestamp values stored in the array are for the same, and most recently completed, peer delay message exchange. For each timestamp, only 48-bits are valid (the upper 16-bits are always zero).";
  reference
    "14.8.53 of IEEE Std 802.1AS";
}
augment
  "/ptp-tp:tp"+
  "/ptp-tp:instances"+
  "/ptp-tp:instance"+
  "/ptp-tp:ports"+
  "/ptp-tp:port" {
    description
      "Augment to add port-statistics-ds to IEEE Std 1588 PTP Port.";
    container port-statistics-ds {
      description
        "Provides counters associated with the port of the PTP Instance.";
      reference
        "14.10 of IEEE Std 802.1AS";
leaf rx-sync-count {
    type yang:counter32;
    config false;
    description
        "Counter that increments every time synchronization information
         is received."
    reference
        "14.10.2 of IEEE Std 802.1AS";
}
leaf rx-one-step-sync-count {
    type yang:counter32;
    config false;
    description
        "Counter that increments every time a one-step Sync message is
         received."
    reference
        "14.10.3 of IEEE Std 802.1AS";
}
leaf rx-follow-up-count {
    type yang:counter32;
    config false;
    description
        "Counter that increments every time a Follow_Up message is
         received."
    reference
        "14.10.4 of IEEE Std 802.1AS";
}
leaf rx-pdelay-req-count {
    type yang:counter32;
    config false;
    description
        "Counter that increments every time a Pdelay_Req message is
         received."
    reference
        "14.10.5 of IEEE Std 802.1AS";
}
leaf rx-pdelay-resp-count {
    type yang:counter32;
    config false;
    description
        "Counter that increments every time a Pdelay_Resp message is
         received."
    reference
        "14.10.6 of IEEE Std 802.1AS";
}
leaf rx-pdelay-resp-follow-up-count {
type yang:counter32;
config false;
description
"Counter that increments every time a Pdelay Resp Follow_Up
message is received.";
reference
"14.10.7 of IEEE Std 802.1AS";
}
leaf rx-announce-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time an Announce message is
  received.";
  reference
  "14.10.8 of IEEE Std 802.1AS";
}
leaf rx-packet-discard-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time a PTP message of the
  respective PTP Instance is discarded.";
  reference
  "14.10.9 of IEEE Std 802.1AS";
}
leaf sync-receipt-timeout-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time a sync receipt timeout
  occurs.";
  reference
  "14.10.10 of IEEE Std 802.1AS";
}
leaf announce-receipt-timeout-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time an announce receipt timeout
  occurs.";
  reference
  "14.10.11 of IEEE Std 802.1AS";
}
leaf pdelay-allowed-lost-exceeded-count {
  type yang:counter32;
config false;

description
"Counter that increments every time the value of the variable
lostResponses exceeds the value of the variable
allowedLostResponses, in the RESET state of the MDPdelayReq
state machine.";

reference
"14.10.12 of IEEE Std 802.1AS";

leaf tx-sync-count {
  type yang:counter32;
  config false;
  description
  "Counter that increments every time synchronization information
  is transmitted.";
  reference
  "14.10.13 of IEEE Std 802.1AS";
}

leaf tx-one-step-sync-count {
  type yang:counter32;
  config false;
  description
  "Counter that increments every time a one-step Sync message is
  transmitted.";
  reference
  "14.10.14 of IEEE Std 802.1AS";
}

leaf tx-follow-up-count {
  type yang:counter32;
  config false;
  description
  "Counter that increments every time a Follow_Up message is
  transmitted.";
  reference
  "14.10.15 of IEEE Std 802.1AS";
}

leaf tx-pdelay-req-count {
  type yang:counter32;
  config false;
  description
  "Counter that increments every time a Pdelay_Req message is
  transmitted.";
  reference
  "14.10.16 of IEEE Std 802.1AS";
}

leaf tx-pdelay-resp-count {
type yang:counter32;
config false;
description
  "Counter that increments every time a Pdelay_Resp message is
  transmitted.";
reference
  "14.10.17 of IEEE Std 802.1AS";
leaf tx-pdelay-resp-follow-up-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time a Pdelay_Resp_Follow_Up
  message is transmitted.";
reference
  "14.10.18 of IEEE Std 802.1AS";
}
leaf tx-announce-count {
  type yang:counter32;
  config false;
description
  "Counter that increments every time an Announce message is
  transmitted.";
reference
  "14.10.19 of IEEE Std 802.1AS";
}

augment
  "/ptp-tp:ptp"+
  "/ptp-tp:instances"+
  "/ptp-tp:instance"+
  "/ptp-tp:ports"+
  "/ptp-tp:port" {
  description
    "Augment to add asymmetry-measurement-mode-ds to IEEE Std 1588 PTP
    Port.";
  container asymmetry-measurement-mode-ds {
    description
      "Represents the capability to enable/disable the Asymmetry
      Compensation Measurement Procedure on a PTP Port. This data set
      is used instead of the CMLDS asymmetry-measurement-mode-ds when
      only a single PTP Instance is present (i.e., CMLDS is not used).";
    reference
      "14.13 of IEEE Std 802.1AS
      Annex G of IEEE Std 802.1AS";
leaf enabled {
    type boolean;
    description
    "For full-duplex IEEE Std 802.3 media, the value is true if an
    asymmetry measurement is being performed for the link attached
to this PTP Port, and false otherwise. For all other media, the
    value shall be false.";
}

leaf is-measuring-delay {
    type boolean;
    config false;
    description
    "This leaf is analogous to is-measuring-delay for a PTP Port, but
    applicable to this Link Port.";
    reference
    "14.16.4 of IEEE Std 802.1AS";
}

leaf as-capable-across-domains {
    type boolean;
}
config false;

description
"This leaf is true when all PTP Instances (domains) for this Link Port detect proper exchange of Pdelay messages."

reference
"11.2.2 of IEEE Std 802.1AS
14.16.5 of IEEE Std 802.1AS";

leaf mean-link-delay-thresh {
  type ptp-ty:time-interval;
  description
  "Propagation time threshold for mean-link-delay, above which a Link Port is not considered capable of participating in the IEEE Std 802.1AS protocol."
  reference
  "14.16.7 of IEEE Std 802.1AS";
}

leaf initial-log-pdelay-req-interval {
  type int8;
  description
  "This leaf is analogous to initial-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.10 of IEEE Std 802.1AS";
}

leaf current-log-pdelay-req-interval {
  type int8;
  config false;
  description
  "This leaf is analogous to current-log-pdelay-req-interval for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.11 of IEEE Std 802.1AS";
}

leaf use-mgt-log-pdelay-req-interval {
  type boolean;
  description
  "This leaf is analogous to use-mgt-log-pdelay-req-interval for a mgt Port, but applicable to this Link Port."
  reference
  "14.16.12 of IEEE Std 802.1AS";
}

leaf mgt-log-pdelay-req-interval {
  type int8;
  description
  "This leaf is analogous to mgt-log-pdelay-req-interval for a PTP
leaf initial-compute-neighbor-rate-ratio {
  type boolean;
  description
  "This leaf is analogous to initial-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.13 of IEEE Std 802.1AS";
}

leaf current-compute-neighbor-rate-ratio {
  type boolean;
  config false;
  description
  "This leaf is analogous to current-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.15 of IEEE Std 802.1AS";
}

leaf use-mgt-compute-neighbor-rate-ratio {
  type boolean;
  description
  "This leaf is analogous to use-mgt-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.16 of IEEE Std 802.1AS";
}

leaf mgt-compute-neighbor-rate-ratio {
  type boolean;
  description
  "This leaf is analogous to mgt-compute-neighbor-rate-ratio for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.17 of IEEE Std 802.1AS";
}

leaf initial-compute-mean-link-delay {
  type boolean;
  description
  "This leaf is analogous to initial-compute-mean-link-delay for a PTP Port, but applicable to this Link Port."
  reference
  "14.16.18 of IEEE Std 802.1AS";
}

leaf current-compute-mean-link-delay {

type boolean;
config false;
description
"This leaf is analogous to current-compute-mean-link-delay for a
PTP Port, but applicable to this Link Port."
reference
"14.16.19 of IEEE Std 802.1AS";
leaf use-mgt-compute-mean-link-delay {
    type boolean;
description
"This leaf is analogous to use-mgt-compute-mean-link-delay for a
PTP Port, but applicable to this Link Port."
reference
"14.16.20 of IEEE Std 802.1AS";
}
leaf mgt-compute-mean-link-delay {
    type boolean;
description
"This leaf is analogous to mgt-compute-mean-link-delay for a PTP
Port, but applicable to this Link Port."
reference
"14.16.21 of IEEE Std 802.1AS";
}
leaf allowed-lost-responses {
    type uint8;
description
"This leaf is analogous to allowed-lost-responses for a PTP Port,
but applicable to this Link Port."
reference
"14.16.22 of IEEE Std 802.1AS";
}
leaf allowed-faults {
    type uint8;
description
"This leaf is analogous to allowed-faults for a PTP Port, but
applicable to this Link Port."
reference
"14.16.23 of IEEE Std 802.1AS";
}
leaf-list pdelay-truncated-timestamps {
    type uinteger48;
    config false;
    min-elements 4;
    max-elements 4;
description
"This leaf is analogous to pdelay-truncated-timestamps for a PTP Port, but applicable to this Link Port."

reference
"14.16.25 of IEEE Std 802.1AS"

augment
"/ptp-\*:ptp"+
"/ptp-\*:common-services"+
"/ptp-\*:cmlds"+
"/ptp-\*:ports"+
"/ptp-\*:port" {

description
"Augment to add port-statistics-ds to IEEE Std 1588 Link Port."

container port-statistics-ds {

description
"This container is analogous to port-statistics-ds for a PTP Port, but applicable to this Link Port."

reference
"14.17 of IEEE Std 802.1AS"

leaf rx-pdelay-req-count {

type yang:counter32;
$config false;

description
"This leaf is analogous to rx-pdelay-req-count for a PTP Port, but applicable to this Link Port."

reference
"14.17.2 of IEEE Std 802.1AS"
}

leaf rx-pdelay-resp-count {

type yang:counter32;
$config false;

description
"This leaf is analogous to rx-pdelay-resp-count for a PTP Port, but applicable to this Link Port."

reference
"14.17.3 of IEEE Std 802.1AS"
}

leaf rx-pdelay-resp-follow-up-count {

type yang:counter32;
$config false;

description
"This leaf is analogous to rx-pdelay-resp-follow-up-count for a PTP Port, but applicable to this Link Port."

reference
"14.17.4 of IEEE Std 802.1AS";
leaf rx-packet-discard-count {
  type yang:counter32;
  config false;
  description
  "This leaf is analogous to rx-packet-discard-count for a PTP
  Port, but applicable to this Link Port."
  reference
  "14.17.5 of IEEE Std 802.1AS";
}

leaf pdelay-allowed-lost-exceeded-count {
  type yang:counter32;
  config false;
  description
  "This leaf is analogous to pdelay-allowed-lost-exceeded-count
  for a PTP Port, but applicable to this Link Port."
  reference
  "14.17.6 of IEEE Std 802.1AS";
}

leaf tx-pdelay-req-count {
  type yang:counter32;
  config false;
  description
  "This leaf is analogous to tx-pdelay-req-count for a PTP Port,
  but applicable to this Link Port."
  reference
  "14.17.7 of IEEE Std 802.1AS";
}

leaf tx-pdelay-resp-count {
  type yang:counter32;
  config false;
  description
  "This leaf is analogous to tx-pdelay-resp-count for a PTP Port,
  but applicable to this Link Port."
  reference
  "14.17.8 of IEEE Std 802.1AS";
}

leaf tx-pdelay-resp-follow-up-count {
  type yang:counter32;
  config false;
  description
  "This leaf is analogous to tx-pdelay-resp-follow-up-count for a
  PTP Port, but applicable to this Link Port."
  reference
  "14.17.9 of IEEE Std 802.1AS";
}
augment
"/ptp-tt:ptp"+
"/ptp-tt:common-services"+
"/ptp-tt:cmlds"+
"/ptp-tt:ports"+
"/ptp-tt:port" {

description
"Augment to add asymmetry-measurement-mode-ds to IEEE Std 1588 Link Port."

container asymmetry-measurement-mode-ds {

description
"This container is analogous to asymmetry-measurement-mode-ds for a PTP Port, but applicable to this Link Port."

reference
"14.18 of IEEE Std 802.1AS"

leaf enabled {

type boolean;

description
"This leaf is analogous to asymmetry-measurement-mode-ds.enabled for a PTP Port, but applicable to this Link Port."

reference
"14.13.2 of IEEE Std 802.1AS"

}