



**IEEE Standard for
Local and Metropolitan Area Networks—
Bridges and Bridged Networks
Amendment 36:
YANG Data Models for Scheduled
Traffic, Frame Preemption, and
Per-Stream Filtering and Policing**

IEEE Computer Society

Developed by the
LAN/MAN Standards Committee

IEEE Std 802.1Qcw™-2023
(Amendment to IEEE Std 802.1Q™-2022
as amended by IEEE Std 802.1Qcz™-2023)

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Local and Metropolitan Area Networks—**

Bridges and Bridged Networks

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Approved 21 September 2023
IEEE SA Standards Board

Abstract: This amendment specifies YANG data models that allow configuration and status reporting for Bridges and Bridge components with the capabilities of scheduled traffic, frame preemption, and Per-Stream Filtering and Policing.

Keywords: amendment, Bridged Local Area Networks, frame preemption, IEEE 802.1Q™, IEEE 802.1Qcw™, Local Area Networks (LANs), MAC Bridges, Per-Stream Filtering and Policing, scheduled traffic, traffic shaping, Virtual Bridged Local Area Networks (virtual LANs), YANG

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Introduction

This introduction is not part of IEEE Std 802.1Qcw™-2023, IEEE Standard for Local and Metropolitan Area Networks—Bridges and Bridged Networks—Amendment 36: YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing.

IEEE Std 802.1Qcw™-2023: YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing supports configuration and status reporting for Bridges and Bridge components with the capabilities of scheduled traffic, frame preemption, and per-stream filtering and policing.

This standard contains state-of-the-art material. The area covered by this standard is undergoing evolution. Revisions are anticipated within the next few years to clarify existing material, to correct possible errors, and to incorporate new related material. Information on the current revision state of this and other IEEE 802 standards may be obtained from

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IEEE Standard for
Local and Metropolitan Area Networks—

Bridges and Bridged Networks

Amendment 36: YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing

(This amendment is based on IEEE Std 802.1Q™-2022 as amended by IEEE Std 802.1Qcz-2023.)

NOTE—The editing instructions contained in this amendment define how to merge the material contained therein into the existing base standard and its amendments to form the comprehensive standard.

The editing instructions are shown in ***bold italics***. Four editing instructions are used: change, delete, insert, and replace. ***Change*** is used to make corrections in existing text or tables. The editing instruction specifies the location of the change and describes what is being changed by using ~~strike~~ (to remove old material) and under (to add new material). ***Delete*** removes existing material. ***Insert*** adds new material without disturbing the existing material. Deletions and insertions may require renumbering. If so, renumbering instructions are given in the editing instruction. ***Replace*** is used to make changes in figures or equations by removing the existing figure or equation and replacing it with a new one. Editing instructions, change markings, and this note will not be carried over into future editions because the changes will be incorporated into the base standard.⁶

⁶ Notes in text, tables, and figures are given for information only and do not contain requirements needed to implement the standard.

1. Overview

1.3 Introduction

Insert new list item cs) after item cr) in 1.3 and renumber the subsequent list items accordingly:

- cs) Define YANG configuration and operational state models (Clause 48) in support of scheduled traffic, frame preemption, and Per-Stream Filtering and Policing.

12. Bridge management

12.29 Managed objects for scheduled traffic

12.29.1 The Gate Parameter Table

Insert two new rows at the end of Table 12-32 as follows (unchanged rows not shown):

Table 12-32—The Gate Parameter Table

Name	Data type	Operations supported ^a	Conformance ^b	References
SupportedCycleMax	RationalNumber (seconds)	R	B, E	8.6.8.4, 12.29.1.3, 12.29.1.6
SupportedIntervalMax	Integer	R	B, E	8.6.8.4, 12.29.1.7

^a R= Read only access; RW = Read/Write access.

^b B = Required for Bridge or Bridge component support of enhancements for scheduled traffic; E = Required for end station support of enhancements for scheduled traffic.

12.29.1.2 The gate control list structure and data types

12.29.1.2.1 GateControlEntry

Change 12.29.1.2.1 as follows:

A GateControlEntry consists of an operation name, followed by ~~up to~~ 2 parameters associated with the operation, as detailed in Table 8-7. The first parameter, ~~if present~~, is a gateStatesValue (12.29.1.2.2); the second parameter, ~~if present~~, is a timeIntervalValue (12.29.1.2.3).

Insert 12.29.1.6 and 12.29.1.7 after 12.29.1.5 as follows:

12.29.1.6 SupportedCycleMax

The maximum value supported by this Port of the AdminCycleTime (8.6.9.4.3) and OperCycleTime (8.6.9.4.19) parameters.

12.29.1.7 SupportedIntervalMax

The maximum value supported by this Port of the timeIntervalValue (12.29.1.2.3) parameter.

12.31 Managed objects for per-stream classification and metering

12.31.1 The Stream Parameter Table

Insert two new rows at the end of Table 12-34 as follows (unchanged rows not shown):

Table 12-34—The Stream Parameter Table

Name	Data type	Operations supported ^a	Conformance ^b	References
SupportedCycleMax	RationalNumber (seconds)	R	PSFP, ATS	8.6.5.4, 12.29.1.3, 12.29.1.6
SupportedIntervalMax	Integer	R	PSFP, ATS	8.6.5.4, 12.29.1.7

^a R= Read only access; RW = Read/Write access.

^b PSFP = Required for Bridge, Bridge component, or end station support of PSFP.

psfp = Optional for Bridge, Bridge component, or end station support of PSFP.

ATS = Required for Bridge or Bridge component support of ATS.

ats = Optional for Bridge or Bridge component support of ATS.

CI = Required for Bridge or Bridge component support of CI.

Insert 12.31.1.7 and 12.31.1.8 after 12.31.1.6 as follows:

12.31.1.7 SupportedCycleMax

The maximum value supported by this Port of the AdminCycleTime (8.6.9.4.3) and OperCycleTime (8.6.9.4.19) parameters.

12.31.1.8 SupportedIntervalMax

The maximum value supported by this Bridge component of the timeIntervalValue (12.31.3.2.4) parameter.

12.31.3 The Stream Gate Instance Table

12.31.3.2 The gate control list structure and data types

12.31.3.2.2 StreamGateControlEntry

Change 12.31.3.2.2 as follows:

A StreamGateControlEntry consists of an operation name, followed by three [mandatory](#) parameters [and one optional parameter](#) associated with the operation, as detailed in Table 8-4. The first parameter is a StreamGateStatesValue ([8.6.10.5](#), 12.31.3.2.1); the second parameter is an IPV value ([8.6.10.7](#), 12.31.3.2.3); ~~and~~; the third parameter is a timeIntervalValue ([8.6.9.4.23](#), 12.31.3.2.4); ~~and the fourth parameter is an IntervalOctetMaxValue (8.6.10.1, 12.31.3.2.5).~~ [IntervalOctetMaxValue is optional.](#)

Insert 12.31.3.2.5 after 12.31.3.2.4 as follows:

12.31.3.2.5 IntervalOctetMaxValue

An unsigned integer, denoting an IntervalOctetMax in MSDU octets (see IntervalOctetMax in Table 8-4).

17. Management Information Base (MIB)

17.2 Structure of the MIB

17.2.22 Structure of the IEEE8021-ST-MIB

Insert three new rows at the end of Table 17-28 as follows (unchanged rows not shown):

Table 17-28—IEEE8021-ST-MIB structure

IEEE8021-ST-MIB table/object	Reference
ieee8021STSupportedCycleMaxNumerator	SupportedCycleMax, 12.29.1.6
ieee8021STSupportedCycleMaxDenominator	SupportedCycleMax, 12.29.1.6
ieee8021STSupportedIntervalMax	SupportedIntervalMax, 12.29.1.7

17.2.24 Structure of the IEEE8021-PSFP-MIB

Insert three new rows at the end of Table 17-30 as follows (unchanged rows not shown):

Table 17-30—IEEE8021-PSFP-MIB structure

IEEE8021-PSFP-MIB table/object	Reference
ieee8021PSFPSupportedCycleMaxNumerator	SupportedCycleMax, 12.31.1.7
ieee8021PSFPSupportedCycleMaxDenominator	SupportedCycleMax, 12.31.1.7
ieee8021PSFPSupportedIntervalMax	SupportedIntervalMax, 12.31.1.8

17.7 MIB modules^{7 8}

17.7.14 Definitions for the IEEE8021-SRP-MIB module

Change 17.7.14 as follows:

```
IEEE8021-SRP-MIB DEFINITIONS ::= BEGIN

-- =====
-- MIB for support of IEEE 802.1Qat Stream Reservation Protocol
-- (SRP) in IEEE 802.1Q Bridges.
-- =====

IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    Counter64,
    Unsigned32
        FROM SNMPv2-SMI
    MacAddress,
    TEXTUAL-CONVENTION,
    TruthValue
        FROM SNMPv2-TC
    MODULE-COMPLIANCE,
    OBJECT-GROUP
        FROM SNMPv2-CONF
    ieee802dot1mibs,
IEEE8021PriorityCodePoint,
    IEEE8021VlanIndex
        FROM IEEE8021-TC-MIB
    IEEE8021FqtssTrafficClassValue
        FROM IEEE8021-FQTSS-MIB
    ieee8021BridgeBaseComponentId,
    ieee8021BridgeBaseEntry,
    ieee8021BridgeBasePort,
    ieee8021BridgeBasePortEntry
        FROM IEEE8021-BRIDGE-MIB
;

ieee8021SrpMib MODULE-IDENTITY
    LAST-UPDATED "202211080000Z" November 8, 2022 "202309260000Z" -- September 26, 2023
    ORGANIZATION "IEEE 802.1 Working Group"
    CONTACT-INFO
        " WG-URL: http://www.ieee802.org/1/
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    DESCRIPTION
        "The Bridge MIB module for managing devices that support
        the IEEE Std 802.1Q Stream Reservation Protocol.

        Unless otherwise indicated, the references in this MIB
        module are to IEEE Std 802.1Q-2022.

        Copyright (C) IEEE (20222023).
        This version of this MIB module is part of IEEE Std 802.1Q;
        see that standard for full legal notices."
```

⁷Copyright release for MIBs: Users of this standard may freely reproduce the MIB modules in this standard so that they can be used for their intended purpose.

⁸An ASCII version of this MIB module is attached to the PDF version of this standard, and can be obtained by Web browser from the IEEE 802.1 Website at <https://1.ieee802.org/mib-modules/>.

REVISION "202309260000Z" -- September 26, 2023
DESCRIPTION
"Published as part of IEEE 802.1Qcw.
Changed the applicable SYNTAX of object definitions
ieee8021SrpStreamDataFramePriority, and
ieee8021SrpStreamPreloadDataFramePriority
from IEEE8021PriorityCodePoint to INTEGER
to correct an error identifying PCP encoding SYNTAX
instead of PCP values as intended."

REVISION "202211080000Z" -- November 8, 2022
DESCRIPTION
"Published as part of IEEE Std 802.1Q-2022.
Cross references and contact information updated."

REVISION "201810040000Z" -- October 4, 2018
DESCRIPTION
"Published as part of IEEE 802.1Qcc-2018.
Added managed objects for Stream Reservation
Protocol (SRP) Enhancements and Performance
Improvements"

REVISION "201806280000Z" -- June 28, 2018
DESCRIPTION
"Published as part of IEEE Std 802.1Q 2018.
Cross references updated. "

REVISION "201512020000Z" -- December 2, 2015
DESCRIPTION
"Published as part of IEEE Std 802.1Q-2014 Cor-1.
ieee8021SrpReservationFailureBridgeId changed to
ieee8021SrpReservationFailureSystemId."

REVISION "201412150000Z" -- December 15, 2014
DESCRIPTION
"Published as part of IEEE Std 802.1Q 2014 revision.
Cross references updated and corrected."

REVISION "201102270000Z" -- February 27, 2011
DESCRIPTION
"Minor edits to contact information etc. as part of
2011 revision of Std 802.1Q."

REVISION "201004190000Z" -- April 19, 2010
DESCRIPTION
"Initial revision, included in IEEE 802.1Qat"
::= { ieee802dot1mibs 19 }

-- =====
-- Textual Conventions
-- =====

IEEE8021SrpStreamRankValue ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"An 802.1 SRP Stream Rank value. This is an integer,
with the following interpretation placed on the value:

0: Emergency, high-rank stream,
1: Non-emergency stream."
REFERENCE "35.2.2.8.5b"
SYNTAX INTEGER {
 emergency(0),
 nonEmergency(1)
}

IEEE8021SrpStreamIdValue ::= TEXTUAL-CONVENTION
DISPLAY-HINT "1x:1x:1x:1x:1x:1x:1x:1x"
STATUS current
DESCRIPTION

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"Represents an SRP Stream ID, which is often defined as a MAC Address followed by a unique 16-bit ID."
SYNTAX OCTET STRING (SIZE (8))

IEEE8021SrpReservationDirectionValue ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"An 802.1 SRP Stream Reservation Direction value. This is an integer, with the following interpretation placed on the value:

0: Talker registrations,
1: Listener registrations."
REFERENCE "35.2.1.2"
SYNTAX INTEGER {
 talkerRegistrations(0),
 listenerRegistrations(1)
}

IEEE8021SrpReservationDeclarationTypeValue ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"An 802.1 SRP Stream Reservation Declaration Type value. This is an integer, with the following interpretation placed on the value:

0: Talker Advertise,
1: Talker Failed,
2: Listener Asking Failed,
3: Listener Ready,
4: Listener Ready Failed."
REFERENCE "35.2.1.3"
SYNTAX INTEGER {
 talkerAdvertise(0),
 talkerFailed(1),
 listenerAskingFailed(2),
 listenerReady(3),
 listenerReadyFailed(4)
}

IEEE8021SrpReservationFailureCodeValue ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"An 802.1 SRP Stream Reservation Failure Code value. This is an integer, with the following interpretation placed on the value:

0: No failure,
1: Insufficient bandwidth,
2: Insufficient Bridge resources,
3: Insufficient bandwidth for Traffic Class,
4: StreamID in use by another Talker,
5: Stream destination address already in use,
6: Stream pre-empted by higher rank,
7: Reported latency has changed,
8: Egress port is not AVBCapable,
9: Use a different destination_address,
10: Out of MSRP resources,
11: Out of MMRP resources,
12: Cannot store destination_address,
13: Requested priority is not an SR Class priority,
14: MaxFrameSize is too large for media,
15: maxFanInPorts limit has been reached,
16: Changes in FirstValue for a registered StreamID,
17: VLAN is blocked on this egress port (Registration Forbidden),
18: VLAN tagging is disabled on this egress port (untagged set),
19: SR class priority mismatch."
REFERENCE "35.2.2.8.7"
SYNTAX INTEGER {
 noFailure(0),

```
        insufficientBandwidth(1),
        insufficientResources(2),
        insufficientTrafficClassBandwidth(3),
        streamIDInUse(4),
        streamDestinationAddressInUse(5),
        streamPreemptedByHigherRank(6),
        latencyHasChanged(7),
        egressPortNotAVBCapable(8),
        useDifferentDestinationAddress(9),
        outOfMSRPResources(10),
        outOfMMRPResources(11),
        cannotStoreDestinationAddress(12),
        priorityIsNoAnSRClass(13),
        maxFrameSizeTooLarge(14),
        maxFanInPortsLimitReached(15),
        firstValueChangedForStreamID(16),
        vlanBlockedOnEgress(17),
        vlanTaggingDisabledOnEgress(18),
        srClassPriorityMismatch(19)
    }

-- =====
-- subtrees in the SRP MIB
-- =====

ieee8021SrpNotifications
    OBJECT IDENTIFIER ::= { ieee8021SrpMib 0 }

ieee8021SrpObjects
    OBJECT IDENTIFIER ::= { ieee8021SrpMib 1 }

ieee8021SrpConformance
    OBJECT IDENTIFIER ::= { ieee8021SrpMib 2 }

ieee8021SrpConfiguration
    OBJECT IDENTIFIER ::= { ieee8021SrpObjects 1 }

ieee8021SrpLatency
    OBJECT IDENTIFIER ::= { ieee8021SrpObjects 2 }

ieee8021SrpStreams
    OBJECT IDENTIFIER ::= { ieee8021SrpObjects 3 }

ieee8021SrpReservations
    OBJECT IDENTIFIER ::= { ieee8021SrpObjects 4 }

-- =====
-- The ieee8021SrpConfiguration subtree
-- This subtree defines the objects necessary for the
-- operational management of SRP.
-- =====

ieee8021SrpBridgeBaseTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021SrpBridgeBaseEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table for SRP main control and status information.
        All writable objects in this table must be persistent
        over power up restart/reboot. These objects augment
        the ieee8021BridgeBasePortTable."
    ::= { ieee8021SrpConfiguration 1 }

ieee8021SrpBridgeBaseEntry OBJECT-TYPE
    SYNTAX      Ieee8021SrpBridgeBaseEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "SRP control and status information for a Bridge."
    AUGMENTS { ieee8021BridgeBaseEntry }
```

```
 ::= { ieee8021SrpBridgeBaseTable 1 }

Ieee8021SrpBridgeBaseEntry ::=
  SEQUENCE {
    ieee8021SrpBridgeBaseMsrpEnabledStatus
      TruthValue,
    ieee8021SrpBridgeBaseMsrpTalkerPruning
      TruthValue,
    ieee8021SrpBridgeBaseMsrpMaxFanInPorts
      Unsigned32,
    ieee8021SrpBridgeBaseMsrpLatencyMaxFrameSize
      Unsigned32,
    ieee8021SrpBridgeBaseMsrpTalkerVlanPruning
      TruthValue,
    ieee8021SrpBridgeBaseMsrpMaxSRClasses
      Unsigned32
  }

ieee8021SrpBridgeBaseMsrpEnabledStatus OBJECT-TYPE
  SYNTAX      TruthValue
  MAX-ACCESS  read-create
  STATUS      current
  DESCRIPTION
    "The administrative status requested by management for
    MSRP. The value true(1) indicates that MSRP should
    be enabled on this device, in all VLANs, on all ports
    for which it has not been specifically disabled. When
    false(2), MSRP is disabled, in all VLANs and on all
    ports, and all MSRP frames will be forwarded
    transparently. This objects affects both Applicant and
    Registrar state machines. A transition from false(2)
    to true(1) will cause a reset of all MSRP state
    machines on all ports.

    This object may be modified while the corresponding
    instance of ieee8021BridgeBaseRowStatus is active(1).

    The value of this object MUST be retained across
    reinitializations of the management system."
  REFERENCE   "35.2.1.4d"
  DEFVAL      { true }
  ::= { ieee8021SrpBridgeBaseEntry 1 }

ieee8021SrpBridgeBaseMsrpTalkerPruning OBJECT-TYPE
  SYNTAX      TruthValue
  MAX-ACCESS  read-create
  STATUS      current
  DESCRIPTION
    "The value of the talkerPruning parameter, which
    controls the propagation of Talker declarations.
    The value true(1) indicates that Talker attributes
    are only declared on ports that have the Stream
    destination_address registered in the MMRP MAC
    Address Registration Entries. When false(2),
    Talker attribute are declared on all egress ports
    in the active topology.

    The value of this object MUST be retained across
    reinitializations of the management system."
  REFERENCE   "12.22.1, 35.2.1.4b, 35.2.4.3.1"
  DEFVAL      { false }
  ::= { ieee8021SrpBridgeBaseEntry 2 }

ieee8021SrpBridgeBaseMsrpMaxFanInPorts OBJECT-TYPE
  SYNTAX      Unsigned32
  MAX-ACCESS  read-create
  STATUS      current
  DESCRIPTION
    "The value of the msrpMaxFanInPorts parameter, which
    limits the total number of ports on a Bridge that
    are allowed to establish reservations for inbound
    Streams. A value of zero (0) indicates no fan-in
```

limit is being specified and calculations involving fan-in will only be limited by the number of MSRP enabled ports.

The value of this object MUST be retained across reinitializations of the management system."

REFERENCE "12.22.1, 35.2.1.4f"
DEFVAL { 0 }
::= { ieee8021SrpBridgeBaseEntry 3 }

ieee8021SrpBridgeBaseMsrpLatencyMaxFrameSize OBJECT-TYPE

SYNTAX Unsigned32
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"The value of msrpLatencyMaxFrameSize parameter which is used in the calculation of the maximum latency through a Bridge. The maximum size is defined to be 2000 octets by default, but may be set to a smaller or larger value dependent on the particular Bridge configuration. This parameter does not imply any type of policing of frame size, it is only used in the latency calculations.

The value of this object MUST be retained across reinitializations of the management system."

REFERENCE "12.22.1, 35.2.1.4g"
DEFVAL { 2000 }
::= { ieee8021SrpBridgeBaseEntry 4 }

ieee8021SrpBridgeBaseMsrpTalkerVlanPruning OBJECT-TYPE

SYNTAX TruthValue
MAX-ACCESS read-create
STATUS current
DESCRIPTION

"This parameter allows to limit the Talker declaration to ports, that have the Stream's VLAN identifier registered as a member in the VLAN Registration Entries. The value true(1) indicates that Talker declarations are only sent out on ports, that have the Stream's VLAN identifier registered as a member in the VLAN Registration Entries. When false(2), Talker declarations are propagated according to the VLAN spanning tree."

REFERENCE "12.22.1, 35.2.1.4l"
DEFVAL { false }
::= { ieee8021SrpBridgeBaseEntry 5 }

ieee8021SrpBridgeBaseMsrpMaxSRClasses OBJECT-TYPE

SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"This attribute provides the maximum number of SR classes supported by the Bridge."

REFERENCE "12.22.1, 35.2.1.4m"
::= { ieee8021SrpBridgeBaseEntry 6 }

ieee8021SrpBridgePortTable OBJECT-TYPE

SYNTAX SEQUENCE OF Ieee8021SrpBridgePortEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION

"A table for SRP control and status information about every Bridge Port. Augments the ieee8021BridgeBasePortTable."

::= { ieee8021SrpConfiguration 2 }

ieee8021SrpBridgePortEntry OBJECT-TYPE

SYNTAX Ieee8021SrpBridgePortEntry
MAX-ACCESS not-accessible
STATUS current

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```
DESCRIPTION
    "SRP control and status information for a Bridge Port."
AUGMENTS { ieee8021BridgeBasePortEntry }
::= { ieee8021SrpBridgePortTable 1 }

Ieee8021SrpBridgePortEntry ::=
SEQUENCE {
    ieee8021SrpBridgePortMsrpEnabledStatus
        TruthValue,
    ieee8021SrpBridgePortMsrpFailedRegistrations
        Counter64,
    ieee8021SrpBridgePortMsrpLastPduOrigin
        MacAddress,
    ieee8021SrpBridgePortSrPvid
        IEEE8021VlanIndex,
    ieee8021SrpBridgePortMsrpTalkerPrunningPerPort
        TruthValue
}

ieee8021SrpBridgePortMsrpEnabledStatus OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The administrative state of MSRP operation on this port. The
    value true(1) indicates that MSRP is enabled on this port
    in all VLANs as long as ieee8021BridgeMsrpEnabledStatus is
    also true(1). A value of false(2) indicates that MSRP is
    disabled on this port in all VLANs: any MSRP frames received
    will be silently discarded, and no MSRP registrations will be
    propagated from other ports. Setting this to a value of
    true(1) will be stored by the agent but will only take
    effect on the MSRP protocol operation if
    ieee8021BridgeMsrpEnabledStatus
    also indicates the value true(1). This object affects
    all MSRP Applicant and Registrar state machines on this
    port. A transition from false(2) to true(1) will
    cause a reset of all MSRP state machines on this port.

    The value of this object MUST be retained across
    reinitializations of the management system."
REFERENCE   "35.2.1.4e"
DEFVAL      { true }
::= { ieee8021SrpBridgePortEntry 1 }

ieee8021SrpBridgePortMsrpFailedRegistrations OBJECT-TYPE
SYNTAX      Counter64
UNITS       "failed MSRP registrations"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The total number of failed MSRP registrations, for any
    reason, in all VLANs, on this port.

    Discontinuities in the value of the counter can occur at
    re-initialization of the management system, and at other
    times as indicated by the value of ifCounterDiscontinuityTime
    object of the associated interface (if any)."
REFERENCE   "10.7.12.1"
::= { ieee8021SrpBridgePortEntry 2 }

ieee8021SrpBridgePortMsrpLastPduOrigin OBJECT-TYPE
SYNTAX      MacAddress
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The Source MAC Address of the last MSRP message
    received on this port."
REFERENCE   "10.7.12.2"
::= { ieee8021SrpBridgePortEntry 3 }

ieee8021SrpBridgePortSrPvid OBJECT-TYPE
```

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```
SYNTAX      IEEE8021VlanIndex
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "The default VLAN ID that Streams are assigned to.
    Talkers learn this VID from the SRP Domain attribute
    and tag Streams accordingly.

    The value of this object MUST be retained across
    reinitializations of the management system."
REFERENCE   "35.2.2.8.3b"
DEFVAL      { 2 }
::= { ieee8021SrpBridgePortEntry 4 }

ieee8021SrpBridgePortMsrpTalkerPrunningPerPort OBJECT-TYPE
SYNTAX      TruthValue
MAX-ACCESS  read-create
STATUS      current
DESCRIPTION
    "This parameter controls the forwarding behavior for
    Talker declarations on the port when the TalkerPrunning
    parameter is disabled for the bridge. The value true(1)
    indicates, that Talker declarations are only forwarded
    on that port, if the destination_address of the Stream
    is found in the MAC Address Registration Entries for the
    port. When false(2), Talker declarations are forwarded
    on that port regardless of the destination address."
REFERENCE   "12.22.2, 35.2.1.4k"
DEFVAL      { false }
::= { ieee8021SrpBridgePortEntry 5 }

-- =====
-- The ieee8021SrpLatency subtree
-- This subtree defines the objects necessary for retrieving
-- the latency of the various traffic classes on a port.
-- =====

-- =====
-- the ieee8021SrpLatencyTable
-- =====
ieee8021SrpLatencyTable OBJECT-TYPE
SYNTAX      SEQUENCE OF Ieee8021SrpLatencyEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "A table containing a set of latency measurement
    parameters for each traffic class."
REFERENCE   "35.2.2.8.6"
::= { ieee8021SrpLatency 1 }

ieee8021SrpLatencyEntry OBJECT-TYPE
SYNTAX      Ieee8021SrpLatencyEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "A list of objects containing latency information
    for each traffic class. Rows in the table are
    automatically created for ports that are not an
    SRP domain boundary port (i.e., SRPdomainBoundaryPort
    is FALSE). See 35.1.4, 8.8.2, 12.22.3."
INDEX      { ieee8021BridgeBaseComponentId,
              ieee8021BridgeBasePort,
              ieee8021SrpTrafficClass }
::= { ieee8021SrpLatencyTable 1 }

Ieee8021SrpLatencyEntry ::=
SEQUENCE {
    ieee8021SrpTrafficClass
        IEEE8021FqtssTrafficClassValue,
    ieee8021SrpPortTcLatency
        Unsigned32
}
```

```
ieee8021SrpTrafficClass OBJECT-TYPE
    SYNTAX      IEEE8021FqtssTrafficClassValue
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The traffic class number associated with the
        row of the table.

        Rows in the table are automatically created for
        ports that are not an SRP domain boundary port
        (i.e., SRPdomainBoundaryPort is FALSE)."
```

REFERENCE "35.1.4, 8.8.2, 12.22.3"

::= { ieee8021SrpLatencyEntry 1 }


```
ieee8021SrpPortTcLatency OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "nano-seconds"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The value of the portTcMaxLatency parameter for the
        traffic class. This value is expressed in
        nano-seconds."
```

REFERENCE "35.2.1.4, 35.2.2.8.6"

::= { ieee8021SrpLatencyEntry 2 }


```
-- =====
-- The ieee8021SrpStreams subtree
-- This subtree defines the objects necessary for retrieving
-- the characteristics of the various Streams currently registered.
-- =====

-- =====
-- the ieee8021SrpStreamTable
-- =====
ieee8021SrpStreamTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021SrpStreamEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table containing a set of characteristics
        for each registered Stream."
```

REFERENCE "35.2.2.8"

::= { ieee8021SrpStreams 1 }


```
ieee8021SrpStreamEntry OBJECT-TYPE
    SYNTAX      Ieee8021SrpStreamEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects containing characteristics
        for each registered Stream. Rows in the table are
        automatically created for Streams registered on any
        port of a Bridge."
```

INDEX { ieee8021SrpStreamId }

::= { ieee8021SrpStreamTable 1 }


```
Ieee8021SrpStreamEntry ::=
    SEQUENCE {
        ieee8021SrpStreamId
            IEEE8021SrpStreamIdValue,
        ieee8021SrpStreamDestinationAddress
            MacAddress,
        ieee8021SrpStreamVlanId
            IEEE8021VlanIndex,
        ieee8021SrpStreamTspecMaxFrameSize
            Unsigned32,
        ieee8021SrpStreamTspecMaxIntervalFrames
            Unsigned32,
```

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```
ieee8021SrpStreamDataFramePriority
    INTEGER IEEE8021PriorityCodePoint,
ieee8021SrpStreamRank
    IEEE8021SrpStreamRankValue
}

ieee8021SrpStreamId OBJECT-TYPE
    SYNTAX      IEEE8021SrpStreamIdValue
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The Stream ID associated with the row of the table.

        Rows in the table are automatically created when
        Streams are registered via MSRP."
    REFERENCE   "35.2.2.8.2"
    ::= { ieee8021SrpStreamEntry 1 }

ieee8021SrpStreamDestinationAddress OBJECT-TYPE
    SYNTAX      MacAddress
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The MAC destination address for the Stream described
        by this reservation."
    REFERENCE   "35.2.2.8.3a"
    ::= { ieee8021SrpStreamEntry 2}

ieee8021SrpStreamVlanId OBJECT-TYPE
    SYNTAX      IEEE8021VlanIndex
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The VLAN ID associated with the MSRP registration
        for this Stream."
    REFERENCE   "35.2.2.8.3b"
    ::= { ieee8021SrpStreamEntry 3}

ieee8021SrpStreamTspecMaxFrameSize OBJECT-TYPE
    SYNTAX      Unsigned32 (0..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The maximum size frame that will be sent by
        a Talker for this Stream. This value is part
        of the Traffic Specification for the Stream."
    REFERENCE   "35.2.2.8.4a"
    ::= { ieee8021SrpStreamEntry 4}

ieee8021SrpStreamTspecMaxIntervalFrames OBJECT-TYPE
    SYNTAX      Unsigned32 (0..65535)
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The maximum number of frame that will be sent
        during a class measurement interval (L.2). This
        value is part of the Traffic Specification for
        the Stream."
    REFERENCE   "35.2.2.8.4b, L.2"
    ::= { ieee8021SrpStreamEntry 5}

ieee8021SrpStreamDataFramePriority OBJECT-TYPE
    SYNTAX      INTEGER (0..7) IEEE8021PriorityCodePoint
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The Priority Code Point (PCP) value that the
        referenced Stream will be tagged with. This value
        is used to distinguish Class A and Class B traffic."
    REFERENCE   "35.2.2.8.5a"
    ::= { ieee8021SrpStreamEntry 6}
```

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```
ieee8021SrpStreamRank OBJECT-TYPE
    SYNTAX      IEEE8021SrpStreamRankValue
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "SRP supports emergency and non-emergency.
        Emergency traffic will interrupt non-emergency
        traffic if there is insufficient bandwidth or
        resources available for the emergency traffic."
    REFERENCE   "35.2.2.8.5b"
    ::= { ieee8021SrpStreamEntry 7}

-- =====
-- the ieee8021SrpStreamPreloadTable
-- =====
ieee8021SrpStreamPreloadTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021SrpStreamPreloadEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table containing a set of parameters for each StreamID
        that is preloaded on the Bridge as it initializes."
    REFERENCE   "12.22.6"
    ::= { ieee8021SrpStreams 2 }

ieee8021SrpStreamPreloadEntry OBJECT-TYPE
    SYNTAX      Ieee8021SrpStreamPreloadEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects containing characteristics
        for each registered Stream. Rows in the table are
        automatically created for Streams registered on any
        port of a Bridge."
    INDEX { ieee8021SrpStreamPreloadId }
    ::= { ieee8021SrpStreamPreloadTable 1 }

Ieee8021SrpStreamPreloadEntry ::=
    SEQUENCE {
        ieee8021SrpStreamPreloadId
            IEEE8021SrpStreamIdValue,
        ieee8021SrpStreamPreloadDestinationAddress
            MacAddress,
        ieee8021SrpStreamPreloadVlanId
            IEEE8021VlanIndex,
        ieee8021SrpStreamPreloadTspecMaxFrameSize
            Unsigned32,
        ieee8021SrpStreamPreloadTspecMaxIntervalFrames
            Unsigned32,
        ieee8021SrpStreamPreloadDataFramePriority
            INTEGER IEEE8021PriorityCodePoint,
        ieee8021SrpStreamPreloadRank
            IEEE8021SrpStreamRankValue
    }

ieee8021SrpStreamPreloadId OBJECT-TYPE
    SYNTAX      IEEE8021SrpStreamIdValue
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The 64-bit StreamID is used to match Talker
        registrations with their corresponding Listener
        registrations (35.2.4)."
    REFERENCE   "12.22.6, 35.2.2.8.2"
    ::= { ieee8021SrpStreamPreloadEntry 1 }

ieee8021SrpStreamPreloadDestinationAddress OBJECT-TYPE
    SYNTAX      MacAddress
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
```

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```
"The MAC destination address for the Stream described
by this reservation."
REFERENCE    "12.22.6, 35.2.2.8.3a"
::= { ieee8021SrpStreamPreloadEntry 2}

ieee8021SrpStreamPreloadVlanId OBJECT-TYPE
SYNTAX      IEEE8021VlanIndex
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The VLAN ID associated with the MSRP registration
    for this Stream."
REFERENCE    "12.22.6, 35.2.2.8.3b"
::= { ieee8021SrpStreamPreloadEntry 3}

ieee8021SrpStreamPreloadTspecMaxFrameSize OBJECT-TYPE
SYNTAX      Unsigned32 (0..65535)
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The maximum size frame that will be sent by
    a Talker for this Stream. This value is part
    of the Traffic Specification for the Stream."
REFERENCE    "12.22.6, 35.2.2.8.4a"
::= { ieee8021SrpStreamPreloadEntry 4}

ieee8021SrpStreamPreloadTspecMaxIntervalFrames OBJECT-TYPE
SYNTAX      Unsigned32 (0..65535)
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The maximum number of frames that the Talker may
    transmit in one classMeasurementInterval (34.3).
    This value is part of the Traffic Specification
    for the Stream."
REFERENCE    "12.22.6, 35.2.2.8.4b"
::= { ieee8021SrpStreamPreloadEntry 5}

ieee8021SrpStreamPreloadDataFramePriority OBJECT-TYPE
SYNTAX      INTEGER (0..7) IEEE8021PriorityCodePoint
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "The Priority Code Point (PCP) value that the
    referenced Stream will be tagged with. This value
    is used to distinguish Class A and Class B traffic."
REFERENCE    "12.22.6, 35.2.2.8.5a"
::= { ieee8021SrpStreamPreloadEntry 6}

ieee8021SrpStreamPreloadRank OBJECT-TYPE
SYNTAX      IEEE8021SrpStreamRankValue
MAX-ACCESS  read-write
STATUS      current
DESCRIPTION
    "SRP supports emergency and non-emergency.
    Emergency traffic will interrupt non-emergency
    traffic if there is insufficient bandwidth or
    resources available for the emergency traffic."
REFERENCE    "12.22.6, 35.2.2.8.5b"
::= { ieee8021SrpStreamPreloadEntry 7}

-- =====
-- The ieee8021SrpReservations subtree
-- This subtree defines the objects necessary for retrieving
-- the Stream attribute registrations on each port of a Bridge.
-- =====

-- =====
-- the ieee8021SrpReservationsTable
-- =====
ieee8021SrpReservationsTable OBJECT-TYPE
```

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```
SYNTAX      SEQUENCE OF Ieee8021SrpReservationsEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "A table containing Stream attribute
    registrations per port."
REFERENCE   "35.2.4"
::= { ieee8021SrpReservations 1 }

ieee8021SrpReservationsEntry OBJECT-TYPE
SYNTAX      Ieee8021SrpReservationsEntry
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "A list of objects containing Stream attribute
    registrations per port. Rows in the table are
    automatically created for Streams registered on any
    port of a Bridge."
INDEX { ieee8021SrpReservationStreamId,
        ieee8021SrpReservationDirection,
        ieee8021BridgeBaseComponentId,
        ieee8021BridgeBasePort }
::= { ieee8021SrpReservationsTable 1 }

Ieee8021SrpReservationsEntry ::=
SEQUENCE {
    ieee8021SrpReservationStreamId
        IEEE8021SrpStreamIdValue,
    ieee8021SrpReservationDirection
        IEEE8021SrpReservationDirectionValue,
    ieee8021SrpReservationDeclarationType
        IEEE8021SrpReservationDeclarationTypeValue,
    ieee8021SrpReservationAccumulatedLatency
        Unsigned32,
    ieee8021SrpReservationFailureSystemId
        OCTET STRING,
    ieee8021SrpReservationFailureCode
        IEEE8021SrpReservationFailureCodeValue,
    ieee8021SrpReservationDroppedStreamFrames
        Counter64,
    ieee8021SrpReservationStreamAge
        Unsigned32
}

ieee8021SrpReservationStreamId OBJECT-TYPE
SYNTAX      IEEE8021SrpStreamIdValue
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "The Stream ID associated with the row of the table.

    Rows in the table are automatically created when
    Streams are registered via MSRP."
REFERENCE   "35.2.2.8.2"
::= { ieee8021SrpReservationsEntry 1 }

ieee8021SrpReservationDirection OBJECT-TYPE
SYNTAX      IEEE8021SrpReservationDirectionValue
MAX-ACCESS  not-accessible
STATUS      current
DESCRIPTION
    "The source of this Stream registration, either
    Talker or Listener."
REFERENCE   "35.2.1.2"
::= { ieee8021SrpReservationsEntry 2 }

ieee8021SrpReservationDeclarationType OBJECT-TYPE
SYNTAX      IEEE8021SrpReservationDeclarationTypeValue
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The type of Talker or Listener registration."
```

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```
REFERENCE    "35.2.1.3"
::= { ieee8021SrpReservationsEntry 3 }

ieee8021SrpReservationAccumulatedLatency OBJECT-TYPE
SYNTAX      Unsigned32
UNITS       "nano-seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The Accumulated Latency associated with the current
    registration.

    For Talker registrations this represents the accumulated
    latency from the Talker to the ingress port of this
    Bridge.

    For Listener registrations this represents the accumulated
    latency to the ingress port of the neighbor Bridge or
    end stations. This include the latency of the media
    attached to this egress port."
REFERENCE    "35.2.2.8.6"
::= { ieee8021SrpReservationsEntry 4 }

ieee8021SrpReservationFailureSystemId OBJECT-TYPE
SYNTAX      OCTET STRING(SIZE(8))
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The first system that changes a Talker Advertise to a
    Talker Failed registration will report its System
    Identification in this field. That single System
    Identification is then propagated from system to system."
REFERENCE    "35.2.2.8.7a"
::= { ieee8021SrpReservationsEntry 5 }

ieee8021SrpReservationFailureCode OBJECT-TYPE
SYNTAX      IEEE8021SrpReservationFailureCodeValue
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The first Bridge that changes a Talker Advertise to a
    Talker Failed registration will report the Failure Code
    in this field. That single Failure Code is then propagated
    from Bridge to Bridge."
REFERENCE    "35.2.2.8.7b"
::= { ieee8021SrpReservationsEntry 6 }

ieee8021SrpReservationDroppedStreamFrames OBJECT-TYPE
SYNTAX      Counter64
UNITS       "frames"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "A count of the number of data stream frames that have
    been dropped for whatever reason. These are not MSRP
    frames, but the stream data frames that are carried by
    the MSRP Reservation.

    Discontinuities in the value of the counter can occur at
    re-initialization of the management system, and at other
    times as indicated by the value of ifCounterDiscontinuityTime
    object of the associated interface (if any)."
REFERENCE    "35.2.5.1"
::= { ieee8021SrpReservationsEntry 7 }

ieee8021SrpReservationStreamAge OBJECT-TYPE
SYNTAX      Unsigned32
UNITS       "seconds"
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The number of seconds since the reservation was established
```

```
    on this port."
REFERENCE    "35.2.1.4c"
::= { ieee8021SrpReservationsEntry 8 }

-- =====
-- the ieee8021SrpReservationsPreloadTable
-- =====
ieee8021SrpReservationsPreloadTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021SrpReservationsPreloadEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table containing Stream attribute
        registrations per port."
    REFERENCE   "12.22.7"
    ::= { ieee8021SrpReservations 2 }

ieee8021SrpReservationsPreloadEntry OBJECT-TYPE
    SYNTAX      Ieee8021SrpReservationsPreloadEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects containing Stream attribute
        registrations per port. Rows in the table are
        automatically created for Streams registered on any
        port of a Bridge."
    INDEX { ieee8021SrpReservationsPreloadStreamId,
            ieee8021SrpReservationPreloadDirection,
            ieee8021BridgeBaseComponentId,
            ieee8021BridgeBasePort }
    ::= { ieee8021SrpReservationsPreloadTable 1 }

Ieee8021SrpReservationsPreloadEntry ::=
    SEQUENCE {
        ieee8021SrpReservationsPreloadStreamId
            IEEE8021SrpStreamIdValue,
        ieee8021SrpReservationPreloadDirection
            IEEE8021SrpReservationDirectionValue,
        ieee8021SrpReservationPreloadAccumulatedLatency
            Unsigned32
    }

ieee8021SrpReservationsPreloadStreamId OBJECT-TYPE
    SYNTAX      IEEE8021SrpStreamIdValue
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The 64-bit StreamID is used to match Talker
        registrations with their corresponding Listener
        registrations(35.2.4)."
```

REFERENCE "12.22.7, 35.2.2.8.2"

```
    ::= { ieee8021SrpReservationsPreloadEntry 1 }

ieee8021SrpReservationPreloadDirection OBJECT-TYPE
    SYNTAX      IEEE8021SrpReservationDirectionValue
    MAX-ACCESS  not-accessibleread-write
    STATUS      current
    DESCRIPTION
        "The source of this Stream registration, either
        Talker or Listener"
```

REFERENCE "12.22.7, 35.2.1.1"

```
    ::= { ieee8021SrpReservationsPreloadEntry 2 }

ieee8021SrpReservationPreloadAccumulatedLatency OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "nano-seconds"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The Accumulated Latency associated with the current
        registration."
```

For Talker registrations this represents the accumulated latency from the Talker to the ingress port of this Bridge.

For Listener registrations this represents the accumulated latency to the ingress port of the neighbor Bridge or end stations. This include the latency of the media attached to this egress port."

REFERENCE "12.22.7, 35.2.2.8.6"
::= { ieee8021SrpReservationsPreloadEntry 3 }

```
-- =====
-- IEEE8021 SRP MIB - Conformance Information
-- =====

ieee8021SrpCompliances
  OBJECT IDENTIFIER ::= { ieee8021SrpConformance 1 }
ieee8021SrpGroups
  OBJECT IDENTIFIER ::= { ieee8021SrpConformance 2 }

-- =====
-- units of conformance
-- =====

-- =====
-- the ieee8021SrpConfiguration group
-- =====

ieee8021SrpConfigurationGroup OBJECT-GROUP
  OBJECTS {
    ieee8021SrpBridgeBaseMsrpEnabledStatus,
    ieee8021SrpBridgeBaseMsrpTalkerPruning,
    ieee8021SrpBridgeBaseMsrpMaxFanInPorts,
    ieee8021SrpBridgeBaseMsrpLatencyMaxFrameSize,
    ieee8021SrpBridgeBaseMsrpTalkerVlanPruning,
    ieee8021SrpBridgeBaseMsrpMaxSRClasses,
    ieee8021SrpBridgePortMsrpEnabledStatus,
    ieee8021SrpBridgePortMsrpFailedRegistrations,
    ieee8021SrpBridgePortMsrpLastPduOrigin,
    ieee8021SrpBridgePortSrPvid,
    ieee8021SrpBridgePortMsrpTalkerPruningPerPort
  }
  STATUS      current
  DESCRIPTION
    "Objects that define configuration of SRP."
  ::= { ieee8021SrpGroups 1 }

-- =====
-- the ieee8021SrpLatency group
-- =====

ieee8021SrpLatencyGroup OBJECT-GROUP
  OBJECTS {
    ieee8021SrpPortTcLatency
  }
  STATUS      current
  DESCRIPTION
    "Objects that define latency for SRP."
  ::= { ieee8021SrpGroups 2 }

-- =====
-- the ieee8021SrpStreams group
-- =====

ieee8021SrpStreamsGroup OBJECT-GROUP
  OBJECTS {
    -- ieee8021SrpStreamId,
    ieee8021SrpStreamDestinationAddress,
    ieee8021SrpStreamVlanId,
    ieee8021SrpStreamTspecMaxFrameSize,
```

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```
        ieee8021SrpStreamTspecMaxIntervalFrames,
        ieee8021SrpStreamDataFramePriority,
        ieee8021SrpStreamRank
    }
    STATUS          current
    DESCRIPTION
        "Objects that define Streams for SRP."
    ::= { ieee8021SrpGroups 3 }

-- =====
-- the ieee8021SrpReservations group
-- =====

ieee8021SrpReservationsGroup OBJECT-GROUP
    OBJECTS {
        -- ieee8021SrpReservationStreamId,
        -- ieee8021SrpReservationDirection,
        ieee8021SrpReservationDeclarationType,
        ieee8021SrpReservationAccumulatedLatency,
        ieee8021SrpReservationFailureSystemId,
        ieee8021SrpReservationFailureCode,
        ieee8021SrpReservationDroppedStreamFrames,
        ieee8021SrpReservationStreamAge
    }
    STATUS          current
    DESCRIPTION
        "Objects that define Stream Reservations for SRP."
    ::= { ieee8021SrpGroups 4 }

-- =====
-- the ieee8021SrpConfigurationPruning group
-- =====

ieee8021SrpConfigurationPruningGroup OBJECT-GROUP
    OBJECTS {
        ieee8021SrpBridgeBaseMsrpTalkerVlanPruning,
        ieee8021SrpBridgePortMsrpTalkerPruningPerPort
    }
    STATUS          current
    DESCRIPTION
        "Objects that allow configuration of pruning behavior
        for SRP."
    ::= { ieee8021SrpGroups 5 }

-- =====
-- the ieee8021SrpMonitoringSRclasses group
-- =====

ieee8021SrpMonitoringSRclassesGroup OBJECT-GROUP
    OBJECTS {
        ieee8021SrpBridgeBaseMsrpMaxSRclasses
    }
    STATUS          current
    DESCRIPTION
        "Objects that provides information on the maximum number
        of SR classes supported on the Bridge."
    ::= { ieee8021SrpGroups 6 }

-- =====
-- the ieee8021SrpStreamsPreload group
-- =====

ieee8021SrpStreamsPreloadGroup OBJECT-GROUP
    OBJECTS {
        ieee8021SrpStreamPreloadId,
        ieee8021SrpStreamPreloadDestinationAddress,
        ieee8021SrpStreamPreloadVlanId,
        ieee8021SrpStreamPreloadTspecMaxFrameSize,
        ieee8021SrpStreamPreloadTspecMaxIntervalFrames,
        ieee8021SrpStreamPreloadDataFramePriority,
        ieee8021SrpStreamPreloadRank
    }
}
```

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```
STATUS      current
DESCRIPTION
  "Objects that allow to preload parameters for each
  StreamId on Bridge Ports as the Bridge initializes."
::= { ieee8021SrpGroups 7 }

-- =====
-- the ieee8021SrpReservationsPreload group
-- =====

ieee8021SrpReservationsPreloadGroup OBJECT-GROUP
  OBJECTS {
    ieee8021SrpReservationsPreloadStreamId,
    ieee8021SrpReservationPreloadDirection,
    ieee8021SrpReservationPreloadAccumulatedLatency
  }
  STATUS      current
  DESCRIPTION
    "Objects that allow to initialize Streams within each
    Bridge as it powers up, to preload the Stream
    registrations that will later be provided by operation
    of SRP."
  ::= { ieee8021SrpGroups 8 }

-- =====
-- compliance statements
-- =====

ieee8021SrpCompliance MODULE-COMPLIANCE
  STATUS      current
  DESCRIPTION
    "The compliance statement for devices supporting
    Stream Reservation Protocol.

    Support of the objects defined in the IEEE8021-SRP MIB
    also requires support of the IEEE8021-BRIDGE-MIB; the
    provisions of 17.3.2 apply to implementations claiming
    support of the IEEE8021-SRP MIB."

  MODULE -- this module
    MANDATORY-GROUPS {
      ieee8021SrpConfigurationGroup,
      ieee8021SrpLatencyGroup,
      ieee8021SrpStreamsGroup,
      ieee8021SrpReservationsGroup
    }

  GROUP      ieee8021SrpConfigurationPruningGroup
  DESCRIPTION
    "Implementation of this group is optional. Implementation
    will allow configuration of pruning behavior for SRP."

  GROUP      ieee8021SrpMonitoringSRclassesGroup
  DESCRIPTION
    "Implementation of this group is optional. Implementation
    will allow configuration of pruning behavior for SRP."

  GROUP      ieee8021SrpStreamsPreloadGroup
  DESCRIPTION
    "Implementation of this group is optional. Implementation
    will allow to preload parameters for each StreamId on
    Bridge Ports as the Bridge initializes."

  GROUP      ieee8021SrpReservationsPreloadGroup
  DESCRIPTION
    "Implementation of this group is optional. Implementation
    will allow to initialize Streams within each Bridge as it
    powers up, to preload the Stream registrations that will
    later be provided by operation of SRP."

  ::= { ieee8021SrpCompliances 1 }
```

END

17.7.22 Definitions for the IEEE8021-ST-MIB module

Change 17.7.22 as follows:

```
IEEE8021-ST-MIB DEFINITIONS ::= BEGIN

-- =====
-- MIB for support of the Scheduled Traffic Enhancements
-- for IEEE 802.1Q Bridges.
-- =====

IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    Unsigned32,
    Counter64
        FROM SNMPv2-SMI
    TEXTUAL-CONVENTION,
    TruthValue
        FROM SNMPv2-TC
    MODULE-COMPLIANCE,
    OBJECT-GROUP
        FROM SNMPv2-CONF
    ieee802dot1mibs
        FROM IEEE8021-TC-MIB
    ieee8021BridgeBaseComponentId,
    ieee8021BridgeBasePort
        FROM IEEE8021-BRIDGE-MIB
    ;

ieee8021STMib MODULE-IDENTITY
    LAST-UPDATED "202211080000Z" November 8, 2022 "202309260000Z" -- September 26, 2023
    ORGANIZATION "IEEE 802.1 Working Group"
    CONTACT-INFO
        " WG-URL: http://www.ieee802.org/1/
          WG-EMail: stds-802-1-1@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
        "The Bridge MIB module for managing devices that support
        the Scheduled Traffic Enhancements
        for IEEE 802.1Q Bridges.

        Unless otherwise indicated, the references in this MIB
        module are to IEEE Std 802.1Q-2022 as amended by
        IEEE Std 802.1Qcz and IEEE Std 802.1Qcw.

        Copyright (C) IEEE (20222023).
        This version of this MIB module is part of IEEE Std 802.1Q;
        see that standard for full legal notices."

        REVISION "202309260000Z" -- September 26, 2023
        DESCRIPTION
            "Update to include SupportedCycleMax and
            SupportedIntervalMax parameters.
            Published as part of IEEE Std 802.1Qcw-2023."

        REVISION "202211080000Z" -- November 8, 2022
        DESCRIPTION
            "Published as part of IEEE Std 802.1Q-2022.
            Cross references and contact information updated."

        REVISION "201807010000Z" -- July 1, 2018
        DESCRIPTION
```

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"Published as part of IEEE Std 802.1Q 2018 revision.
Cross references updated and corrected."

REVISION "201608150000Z" -- August 15, 2016

DESCRIPTION

"Revised to include Set-And-Hold-MAC and
Set-And-Release-MAC in the description of
ieee8021STAdminControlList and
ieee8021STOperControlList.
Published as part of IEEE Std 802.1Qbu."

REVISION "201602190000Z" -- February 19, 2016

DESCRIPTION

"Initial version published as part of IEEE Std 802.1Qbv."

::= { ieee802dot1mibs 30 }

-- =====
-- Textual Conventions
-- =====

IEEE8021STTrafficClassValue ::= TEXTUAL-CONVENTION

DISPLAY-HINT "d"

STATUS current

DESCRIPTION

"A traffic class value.
This is the numerical value associated with a traffic
class in a Bridge. Larger values are associated with
higher priority traffic classes."

REFERENCE "12.29.1"

SYNTAX Unsigned32 (0..7)

IEEE8021STPTptimeValue ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"A PTptime value, represented as a 48-bit unsigned integer
number of seconds and a 32-bit unsigned integer number of
nanoseconds.

The first 6 octets represent the number of seconds: the
first octet is the most significant
octet of the 48-bit seconds value and the sixth octet
is the least significant octet of the seconds value.
The remaining octets, 7 through 10, represent the
number of nanoseconds: the seventh octet
is the most significant octet of the 32-bit nanoseconds
value and the tenth octet is the
least significant octet of the nanoseconds value."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"

SYNTAX OCTET STRING (SIZE(10))

-- =====
-- subtrees in the ST MIB
-- =====

ieee8021STNotifications

OBJECT IDENTIFIER ::= { ieee8021STMib 0 }

ieee8021STObjects

OBJECT IDENTIFIER ::= { ieee8021STMib 1 }

ieee8021STConformance

OBJECT IDENTIFIER ::= { ieee8021STMib 2 }

ieee8021STMaxSDUSubtree

OBJECT IDENTIFIER ::= { ieee8021STObjects 1 }

ieee8021STParameters

OBJECT IDENTIFIER ::= { ieee8021STObjects 2 }

-- =====
-- The ieee8021STMaxSDUSubtree subtree

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```
-- This subtree defines the objects necessary for the management
-- of the max SDU size parameters for each traffic class on a Port.
-- =====

-- =====
-- the ieee8021STMaxSDUTable
-- =====

ieee8021STMaxSDUTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021STMaxSDUEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table containing a set of max SDU
        parameters, one for each traffic class.
        All writable objects in this table must be
        persistent over power up restart/reboot."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STMaxSDUSubtree 1 }

ieee8021STMaxSDUEntry OBJECT-TYPE
    SYNTAX      Ieee8021STMaxSDUEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects containing Max SDU size
        for each traffic class supported by the Port."
    INDEX       { ieee8021BridgeBaseComponentId,
                  ieee8021BridgeBasePort,
                  ieee8021STTrafficClass }
    ::= { ieee8021STMaxSDUTable 1 }

Ieee8021STMaxSDUEntry ::=
    SEQUENCE {
        ieee8021STTrafficClass
            IEEE8021STTrafficClassValue,
        ieee8021STMaxSDU
            Unsigned32,
        ieee8021TransmissionOverrun
            Counter64
    }

ieee8021STTrafficClass OBJECT-TYPE
    SYNTAX      IEEE8021STTrafficClassValue
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The traffic class number associated with the row of
        the table.

        A row in this table is created for each traffic class
        that is supported by the Port"
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STMaxSDUEntry 1 }

ieee8021STMaxSDU OBJECT-TYPE
    SYNTAX      Unsigned32
    UNITS       "octets"
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The value of the MaxSDU parameter for the traffic class.
        This value is represented as an unsigned integer. A value
        of 0 is interpreted as the max SDU size supported by
        the underlying MAC.

        The default value of the MaxSDU parameter is 0.

        The value of this object MUST be retained across
        reinitializations of the management system."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
```

```
DEFVAL { 0 }
::= { ieee8021STMaxSDUEntry 2}

ieee8021TransmissionOverrun OBJECT-TYPE
    SYNTAX      Counter64
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "A counter of transmission overrun events, where
         a PDU is still being transmitted by a MAC at the
         time when the transmission gate for the queue closed."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1, 12.29.1.1.2"
    DEFVAL { 0 }
    ::= { ieee8021STMaxSDUEntry 3}

-- =====
-- The ieee8021STParameters subtree
-- This subtree defines the objects necessary for the management
-- of the traffic scheduling mechanism for IEEE Std 802.1Q.
-- =====

-- =====
-- the ieee8021STParametersTable
-- =====

ieee8021STParametersTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF Ieee8021STParametersEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A table that contains the per-port manageable parameters for
         traffic scheduling.

         For a given Port, a row in the table exists.

         All writable objects in this table must be
         persistent over power up restart/reboot."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParameters 1 }

ieee8021STParametersEntry OBJECT-TYPE
    SYNTAX      Ieee8021STParametersEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A list of objects that contains the manageable parameters for
         traffic scheduling for a port."
    INDEX { ieee8021BridgeBaseComponentId,
            ieee8021BridgeBasePort
          }
    ::= { ieee8021STParametersTable 1 }

Ieee8021STParametersEntry ::=
    SEQUENCE {
        ieee8021STGateEnabled
            TruthValue,
        ieee8021STAdminGateStates
            OCTET STRING,
        ieee8021STOperGateStates
            OCTET STRING,
        ieee8021STAdminControlListLength
            Unsigned32,
        ieee8021STOperControlListLength
            Unsigned32,
        ieee8021STAdminControlList
            OCTET STRING,
        ieee8021STOperControlList
            OCTET STRING,
        ieee8021STAdminCycleTimeNumerator
            Unsigned32,
```

```
ieee8021STAdminCycleTimeDenominator
    Unsigned32,
ieee8021STOperCycleTimeNumerator
    Unsigned32,
ieee8021STOperCycleTimeDenominator
    Unsigned32,
ieee8021STAdminCycleTimeExtension
    Unsigned32,
ieee8021STOperCycleTimeExtension
    Unsigned32,
ieee8021STAdminBaseTime
    IEEE8021STPTPtimeValue,
ieee8021STOperBaseTime
    IEEE8021STPTPtimeValue,
ieee8021STConfigChange
    TruthValue,
ieee8021STConfigChangeTime
    IEEE8021STPTPtimeValue,
ieee8021STTickGranularity
    Unsigned32,
ieee8021STCurrentTime
    IEEE8021STPTPtimeValue,
ieee8021STConfigPending
    TruthValue,
ieee8021STConfigChangeError
    Counter64,
ieee8021STSupportedListMax
    Unsigned32,
ieee8021STSupportedCycleMaxNumerator
    Unsigned32,
ieee8021STSupportedCycleMaxDenominator
    Unsigned32,
ieee8021STSupportedIntervalMax
    Unsigned32
}

ieee8021STGateEnabled OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The GateEnabled parameter determines whether traffic scheduling
        is active (true) or inactive (false).

        The value of this object MUST be retained across
        reinitializations of the management system."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
    DEFVAL { false }
    ::= { ieee8021STParametersEntry 1 }

ieee8021STAdminGateStates OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(1))
    MAX-ACCESS  read-write
    STATUS      current
    DESCRIPTION
        "The administrative value of the GateStates parameter for the Port.
        The bits of the octet represent the gate states for the
        corresponding traffic classes; the MS bit corresponds to traffic class 7,
        the LS bit to traffic class 0. A bit value of 0 indicates closed; a
        bit value of 1 indicates open.

        The value of this object MUST be retained across
        reinitializations of the management system."
    REFERENCE   "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 2 }

ieee8021STOperGateStates OBJECT-TYPE
    SYNTAX      OCTET STRING (SIZE(1))
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The operational value of the GateStates parameter for the Port.
```

The bits of the octet represent the gate states for the corresponding traffic classes; the MS bit corresponds to traffic class 7, the LS bit to traffic class 0. A bit value of 0 indicates closed; a bit value of 1 indicates open."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"

::= { ieee8021STParametersEntry 3 }

ieee8021STAdminControlListLength OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The administrative value of the ListMax parameter for the Port. The integer value indicates the number of entries (TLVs) in the AdminControlList.

The value of this object MUST be retained across reinitializations of the management system."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"

::= { ieee8021STParametersEntry 4 }

ieee8021STOperControlListLength OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The operational value of the ListMax parameter for the Port. The integer value indicates the number of entries (TLVs) in the OperControlList."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"

::= { ieee8021STParametersEntry 5 }

ieee8021STAdminControlList OBJECT-TYPE

SYNTAX OCTET STRING

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The administrative value of the ControlList parameter for the Port. The octet string value represents the contents of the control list as an ordered list of entries, each encoded as a TLV, as follows. The first octet of each TLV is interpreted as an unsigned integer representing a gate operation name:

0: SetGateStates

1: Set-And-Hold-MAC

2: Set-And-Release-MAC

3-255: Reserved for future gate operations

The second octet of the TLV is the length field, interpreted as an unsigned integer, indicating the number of octets of the value that follows the length. A length of zero indicates that there is no value (i.e., the gate operation has no parameters).

The third through (3 + length -1)th octets encode the parameters of the gate operation, in the order that they appear in the definition of the operation in Table 8-6. Two parameter types are currently defined:

- GateState:

A GateState parameter is encoded in a single octet. The bits of the octet represent the gate states for the corresponding traffic classes; the MS bit corresponds to traffic class 7, the LS bit to traffic class 0. A bit value of 0 indicates closed; a bit value of 1 indicates open.
- TimeInterval:

A TimeInterval is encoded in 4 octets as a 32-bit unsigned integer, representing a number of nanoseconds. The first octet encodes the most significant 8 bits of the integer, and the fourth octet encodes the least significant 8 bits.

The value of this object MUST be retained across reinitializations of the management system."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 6 }

ieee8021STOperControlList OBJECT-TYPE

SYNTAX OCTET STRING

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The operational value of the ListMax parameter for the Port.
The octet string value represents the contents of the control list as an ordered list of TLVs, as follows.
The first octet of each TLV is interpreted as a gate operation name:
0: SetGateStates
1: Set-And-Hold-MAC
2: Set-And-Release-MAC
3-255: Reserved for future gate operations

The second octet of the TLV is the length field, interpreted as an unsigned integer, indicating the number of octets of the value that follows the length. A length of zero indicates that there is no value (i.e., the gate operation has no parameters).

The third through (3 + length -1)th octets encode the parameters of the gate operation, in the order that they appear in the definition of the operation in Table 8-6. Two parameter types are currently defined:

- GateState:

A GateState parameter is encoded in a single octet. The bits of the octet represent the gate states for the corresponding traffic classes; the MS bit corresponds to traffic class 7, the LS bit to traffic class 0. A bit value of 0 indicates closed; a bit value of 1 indicates open.

- TimeInterval:

A TimeInterval is encoded in 4 octets as a 32-bit unsigned integer, representing a number of nanoseconds. The first octet encodes the most significant 8 bits of the integer, and the fourth octet encodes the least significant 8 bits."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 7 }

ieee8021STAdminCycleTimeNumerator OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The administrative value of the numerator of the CycleTime parameter for the Port.
The numerator and denominator together represent the cycle time as a rational number of seconds.

The value of this object MUST be retained across reinitializations of the management system."

REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 8 }

ieee8021STAdminCycleTimeDenominator OBJECT-TYPE

SYNTAX Unsigned32

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"The administrative value of the denominator of the CycleTime parameter for the Port.
The numerator and denominator together represent the cycle time as a rational number of seconds.

The value of this object MUST be retained across reinitializations of the management system."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 9 }

ieee8021STOperCycleTimeNumerator OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The operational value of the numerator of the CycleTime parameter for the Port.
The numerator and denominator together represent the cycle time as a rational number of seconds."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 10 }

ieee8021STOperCycleTimeDenominator OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The operational value of the denominator of the CycleTime parameter for the Port.
The numerator and denominator together represent the cycle time as a rational number of seconds."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 11 }

ieee8021STAdminCycleTimeExtension OBJECT-TYPE
SYNTAX Unsigned32
UNITS "nanoseconds"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The administrative value of the CycleTimeExtension parameter for the Port.
The value is an unsigned integer number of nanoseconds.

The value of this object MUST be retained across reinitializations of the management system."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 12 }

ieee8021STOperCycleTimeExtension OBJECT-TYPE
SYNTAX Unsigned32
UNITS "nanoseconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The operational value of the CycleTimeExtension parameter for the Port.
The value is an unsigned integer number of nanoseconds."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 13 }

ieee8021STAdminBaseTime OBJECT-TYPE
SYNTAX IEEE8021STPTPtimeValue
UNITS "PTP time"
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The administrative value of the BaseTime parameter for the Port.
The value is a representation of a PTPtime value, consisting of a 48-bit integer number of seconds and a 32-bit integer number of nanoseconds.

The value of this object MUST be retained across reinitializations of the management system."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 14 }

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IEEE Standard for Local and Metropolitan Area Networks—Bridges and Bridged Networks
Amendment 36: YANG Data Models for Scheduled Traffic, Frame Preemption, and Per-Stream Filtering and Policing

```
ieee8021STOperBaseTime OBJECT-TYPE
    SYNTAX      IEEE8021STPTPtimeValue
    UNITS        "PTP time"
    MAX-ACCESS   read-only
    STATUS        current
    DESCRIPTION
        "The operationaloperational value of the BaseTime parameter for the Port.
        The value is a representation of a PTPtime value,
        consisting of a 48-bit integer
        number of seconds and a 32-bit integer number of nanoseconds."
    REFERENCE    "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 15 }

ieee8021STConfigChange OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS   read-write
    STATUS        current
    DESCRIPTION
        "The ConfigChange parameter signals the start of a
        configuration change
        when it is set to TRUE. This should only be done
        when the various administrative parameters
        are all set to appropriate values."
    REFERENCE    "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 16 }

ieee8021STConfigChangeTime OBJECT-TYPE
    SYNTAX      IEEE8021STPTPtimeValue
    UNITS        "PTP time"
    MAX-ACCESS   read-only
    STATUS        current
    DESCRIPTION
        "The PTPtime at which the next config change is scheduled to occur.
        The value is a representation of a PTPtime value,
        consisting of a 48-bit integer
        number of seconds and a 32-bit integer number of nanoseconds.

        The value of this object MUST be retained across
        reinitializations of the management system."
    REFERENCE    "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 17 }

ieee8021STTickGranularity OBJECT-TYPE
    SYNTAX      Unsigned32
    MAX-ACCESS   read-only
    STATUS        current
    DESCRIPTION
        "The granularity of the cycle time clock, represented as an
        unsigned number of tenths of nanoseconds.

        The value of this object MUST be retained across
        reinitializations of the management system."
    REFERENCE    "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 18 }

ieee8021STCurrentTime OBJECT-TYPE
    SYNTAX      IEEE8021STPTPtimeValue
    MAX-ACCESS   read-only
    STATUS        current
    DESCRIPTION
        "The current time, in PTPtime, as maintained by the local system.
        The value is a representation of a PTPtime value,
        consisting of a 48-bit integer
        number of seconds and a 32-bit integer number of nanoseconds."
    REFERENCE    "8.6.8.4, 8.6.9.4, 12.29.1"
    ::= { ieee8021STParametersEntry 19 }

ieee8021STConfigPending OBJECT-TYPE
    SYNTAX      TruthValue
    MAX-ACCESS   read-only
    STATUS        current
    DESCRIPTION
```

"The value of the ConfigPending state machine variable.
The value is TRUE if a configuration change is in progress
but has not yet completed."
REFERENCE "8.6.8.4, 8.6.9.4, 12.29.1"
::= { ieee8021STParametersEntry 20 }

ieee8021STConfigChangeError OBJECT-TYPE
SYNTAX Counter64
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"A counter of the number of times that a re-configuration
of the traffic schedule has been requested with the old
schedule still running and the requested base time was
in the past."
REFERENCE "8.6.8.4, 8.6.9.3, 12.29.1"
::= { ieee8021STParametersEntry 21 }

ieee8021STSupportedListMax OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The maximum value supported by this Port of the
AdminControlListLength and OperControlListLength
parameters."
REFERENCE "12.29.1.5"
::= { ieee8021STParametersEntry 22 }

ieee8021STSupportedCycleMaxNumerator OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The numerator of the SupportedCycleMax parameter for
the Port. The numerator and denominator together
represent the maximum value supported by this Port of
the AdminCycleTime and OperCycleTime parameters"
REFERENCE "12.29.1.6"
::= { ieee8021STParametersEntry 23 }

ieee8021STSupportedCycleMaxDenominator OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The denominator of the SupportedCycleMax parameter for
the Port. The numerator and denominator together
represent the maximum value supported by this Port of
the AdminCycleTime and OperCycleTime parameters"
REFERENCE "12.29.1.6"
::= { ieee8021STParametersEntry 24 }

ieee8021STSupportedIntervalMax OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The maximum value supported by this Port of the
TimeIntervalValue parameter."
REFERENCE "12.29.1.7"
::= { ieee8021STParametersEntry 25 }

-- =====
-- IEEE8021 ~~ST~~~~FTS~~ MIB - Conformance Information
-- =====

ieee8021STCompliances
OBJECT IDENTIFIER ::= { ieee8021STConformance 1 }
ieee8021STGroups
OBJECT IDENTIFIER ::= { ieee8021STConformance 2 }

```
-- =====
-- units of conformance
-- =====

-- =====
-- the ieee8021STObjectsGroup group
-- =====

ieee8021STObjectsGroup OBJECT-GROUP
  OBJECTS {
    ieee8021STMaxSDU,
    ieee8021STTransmissionOverrun,
    ieee8021STGateEnabled,
    ieee8021STAdminGateStates,
    ieee8021STOperGateStates,
    ieee8021STAdminControlListLength,
    ieee8021STOperControlListLength,
    ieee8021STAdminControlList,
    ieee8021STOperControlList,
    ieee8021STAdminCycleTimeNumerator,
    ieee8021STAdminCycleTimeDenominator,
    ieee8021STOperCycleTimeNumerator,
    ieee8021STOperCycleTimeDenominator,
    ieee8021STAdminCycleTimeExtension,
    ieee8021STOperCycleTimeExtension,
    ieee8021STAdminBaseTime,
    ieee8021STOperBaseTime,
    ieee8021STConfigChange,
    ieee8021STConfigChangeTime,
    ieee8021STTickGranularity,
    ieee8021STCurrentTime,
    ieee8021STConfigPending,
    ieee8021STConfigChangeError,
    ieee8021STSupportedListMax,
    ieee8021STSupportedCycleMaxNumerator,
    ieee8021STSupportedCycleMaxDenominator,
    ieee8021STSupportedIntervalMax
  }
  STATUS      current
  DESCRIPTION
    "Objects that allow management of scheduled traffic."
    ::= { ieee8021STGroups 1 }

-- =====
-- compliance statements
-- =====

ieee8021STCompliance MODULE-COMPLIANCE
  STATUS      current
  DESCRIPTION
    "The compliance statement for devices supporting
    scheduled traffic.

    Support of the objects defined in this MIB module
    also requires support of the IEEE8021-BRIDGE-MIB; the
    provisions of 17.3.2 apply to implementations claiming
    support of this MIB. "

  MODULE -- this module
    MANDATORY-GROUPS {
      ieee8021STObjectsGroup
    }

    ::= { ieee8021STCompliances 1 }

END
```

17.7.24 Definitions for the IEEE8021-PSFP-MIB module

Change 17.7.24 as follows:

```
IEEE8021-PSFP-MIB DEFINITIONS ::= BEGIN

-- =====
-- MIB for support of the Per-Stream Filtering and Policing
-- Enhancements for IEEE 802.1Q Bridges.
-- =====

IMPORTS
    MODULE-IDENTITY,
    OBJECT-TYPE,
    Unsigned32,
    Integer32,
    Counter64
        FROM SNMPv2-SMI
    TruthValue, RowStatus
        FROM SNMPv2-TC
    MODULE-COMPLIANCE,
    OBJECT-GROUP
        FROM SNMPv2-CONF
    ieee802dot1mibs
        FROM IEEE8021-TC-MIB
    ieee8021BridgeBaseComponentId
        FROM IEEE8021-BRIDGE-MIB
    IEEE8021STPTPTimeValue
        FROM IEEE8021-ST-MIB
    ;

ieee8021PSFPMib MODULE-IDENTITY
    LAST-UPDATED "202201130000Z" "202309260000Z" -- September 26, 2023
    ORGANIZATION "IEEE 802.1 Working Group"
    CONTACT-INFO
        " WG-URL: http://www.ieee802.org/1/
          WG-EMail: stds-802-1-1@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
        "The Bridge MIB module for managing devices that support
        the Per-Stream Filtering and Policing enhancements
        for IEEE 802.1Q Bridges.

        Unless otherwise indicated, the references in this MIB
        module are to IEEE Std 802.1Q-2022.

        Copyright (C) IEEE (20222023).
        This version of this MIB module is part of IEEE Std 802.1Q;
        see that standard for full legal notices."

        REVISION "202309260000Z" -- September 26, 2023
        DESCRIPTION
            "Update to include SupportedCycleMax and
            SupportedIntervalMax parameters.
            Published as part of IEEE Std 802.1Qcw-2023."

        REVISION "202201130000Z" -- January 13, 2022
        DESCRIPTION
            "Published as part of IEEE Std 802.1Q-2022.
            Cross references and contact information updated."

        REVISION "202011060000Z" -- November 6, 2020
        DESCRIPTION
            "Published as part of IEEE Std 802.1Qcr-2020.
```